Amateur Radio Catalog • Summer '94

$2.50

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Details – p.156

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Since 1957

Attention :

DX Hunters, Contestors, Multi-Band Operators, Rag Chewers and Mobile Operators:

HIGH PERFORMANCE

BEST FEATURES

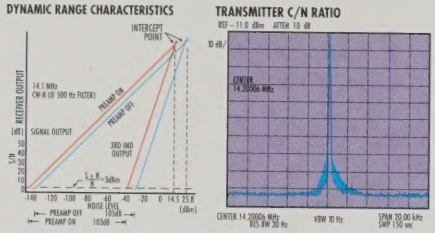
IC-737A

A Winning Combination of Performance and Features Previously Offered Only on Rigs Costing Thousands More!

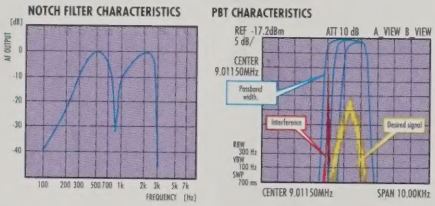
HIGH PERFORMANCE

New D.D.S. (Direct Digital Synthesizer) System – Miniaturized and improved technology provides phenomenal performance increases (higher PLL lockup speeds and improved C/N ratio, phase noise and blocking characteristics).

Pass Band Tuning – Electronically narrows the IF passband to eliminate interference signals (more effective than IF shift offered on competitive models).



Notch Function – Tune out an interfering signal frequency to eliminate unwanted CW or AM carrier tones, while preserving the desired signal's audio response. The combination of PassBand Tuning and Notch Function is very effective on crowded bands.



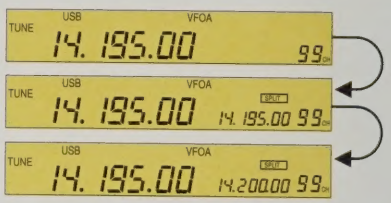
100% Duty Cycle – Large cooling fan and heatsink provide a stable 100 W in SSB, CW and FM modes (40 W in AM).

More High Performance – With full break-in (QSK), built-in electronic keyer, speech compressor, noise blanker, fast/slow AGC, preamp, attenuator, many tuning functions (including direct keypad entry) and dual CW filters (optional).

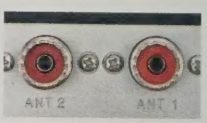
BEST FEATURES

Auto Antenna Tuner – Fast, quiet and smart, *"Spot checks showed that it could match loads with indicated SWRs as high as 10:1"* (February 1993 QST review). Auto-preset memories for each band, **including 160 M.**

Quick Split Function – Transmit and receive frequencies are **displayed simultaneously.** Both can be tuned independently. Call DX stations operating split frequency faster than any of your competition operating a single frequency display model.



Auto Antenna Selector – Two antenna connectors let you select the best antenna for band and conditions from the front panel. Stores to both band memory and memory channels.



Double Band Stacking Register (DBSR) – Memorizes two frequencies and modes **in each band.** Can be used like extra VFOs in one band. Use one register for CW and the other for SSB if you like.

10 Memo Pad Memories – Push "Memo Pad–Write" to quickly store a frequency & mode, for example, if you find a piled-up DX station. Recall just as quick with "Memo Pad–Read."

Large LCD Display – Easy to read in all lighting conditions. Won't "wash out" in direct sunlight.

MORE GREAT FEATURES

- Voice Activated Transmit (VOX)
- 101 Memory Channels
- Multiple Scanning Modes
- General Coverage Receiver
- PC Compatible (w/optional CI-V)
- Many compatible options available
- Dial Lock
- All Mode Squelch
- Carry Strap
- Opt. Mounting Bracket

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ICOM®

AMATEUR ELECTRONIC SUPPLY®

Condensed Listing of New Amateur Radio Equipment

AEA (AEA)

	Reg	Sale
MM-3 Morse Machine Deluxe keyer	$189.00	179.95
AC-1 12vdc 600ma adaptor	21.00	
DC-1 Cigarette lighter cord	7.00	
KK-1 Keyboard keyer for IBM PC	199.00	189.95

DATA CONTROLLERS

PK-88 RS-232 TNC controller	$149.00	134.95
AC-1 12vdc 600 ma adaptor	21.00	
PC-Pakratt-88 IBM program for PK-88	49.00	
PK-96 9600 baud packet controller/14K mem	229.00	199.95
100K 100K memory upgrade for PK-96	50.00	
PK-96/100K 9600 baud controller/100K mem	279.00	249.95
PK-232MBX Controller/int VHF/HF modem/FAX	399.00	CALL
PK-900 Multi-mode digital controller w/FAX	569.00	469.95
DSP-1232 Single port multi-mode controller	789.00	699.95
DSP-2232 Switchable ch multi-mode controller	999.00	899.95
9600 bps modem card option for PK-900	75.00	
AC-4 12vdc 1A power supply	32.00	
AEA-FAX-900 PK-900/IBM FAX software	75.00	
COM Pakratt w/FAX C-64 program; PK-88/232	79.00	74.95
MacRATT w/FAX Macintosh prog; PK-88/232	69.00	64.95
PC-Pakratt II w/FAX IBM program; 88/232	69.00	64.95
PC-Pakratt for Windows/FAX IBM; 88/232	129.00	
Extra PK-232 to radio open ended **cable**	9.00	
IH CABLE PK-232 - Icom/Yaesu/Alinco HT	25.00	
IM CABLE PK-232 - Icom 8-pin mic cable	25.00	
IW CABLE PK-232 - Icom IC-W2A cable	25.00	
KA CABLE PK-232 - Kenwood 13-pin cable	30.00	
KH CABLE PK-232 - Kenwood HT cable	25.00	
KM CABLE PK-232 - Kenwood/Ali 8-pin mic	25.00	
YM CABLE PK-232 - Yaesu 8-pin mic cable	25.00	
RS-232 Y cable Δm	39.00	
Technical manual; PK-232	25.00	
WeFax-256 WX FAX prog; DSP-1232/2232	129.00	
AEA-FAX II Facsimile & wire photo program	149.00	99.95
PCB-88 IBM compatible plug-in packet adapter	179.00	164.95

ANTENNAS

IsoLoop 10-30 150w 10-30MHz 43" loop/50'cable	$389.00	329.95
50' shielded **loop cable, new** style	29.00	
100' shielded **loop cable** w/connectors	39.00	
IT-1 IsoTuner Automatic tuner for IsoLoop	279.00	259.95
IsoPole 144 2m base station antenna	59.00	
IsoPole 220 220MHz base station antenna	59.00	
IsoPole 440 440MHz base station antenna	89.00	
HR-1 2m ½ wave telescopic whip w/BNC	24.00	
HR-2 220MHz ½ wave telescopic whip w/BNC	24.00	
HR-4 440 ½ wave telescopic whip/BNC Dmwfv	24.00	
SWR-121 HF Antenna performance analyzer	399.00	349.95
SWR.COM SWR curve IBM soft; 121 ...Dmwf	75.00	69.95
SWR-121V/U VHF/UHF ant performance analy	469.00	399.95
AA.COM SWR curve IBM soft; 121/121V/U	75.00	
Carrying Case For SWR-121/121V/U	29.00	

MISCELLANEOUS

ARE-60/HL-60 HamLink Phone controller	$269.00	249.95
ARE-61/HL-61 Interface cable for Icom	50.00	
ARE-62/HL-62 Interface cable for Kenwood	50.00	
ARE-63/HL-63 Interface cable for Yaesu	60.00	
OP-80 OpLink For fast CW/stereo headset	130.00	119.95

AEA - continued

	Reg	Sale
ARE-10 Silencer Ext spkr w/DTMF decoder	100.00	
ARE-20 Digitalker Voice synth freq counter	250.00	229.95
RL-60 Radio Link HF remote via handheld	329.00	299.95
ST-1 Satellite tracking hardware/software	399.00	369.95
AVT Master Amiga Video System; SSTV/FAX	319.00	269.95
430-16 16 el 430MHz 14.3db beam Δmwfv	119.00	99.95
ATV Workbook Dm	14.99	
Log Windows Program for IBM PC	99.00	
World Clock	25.00	

AES (AES)

486-SX 33MHz Intel/213M/4M/.28SVGA color.	CALL
486-DX 33MHz Intel/340M/4M/.28SVGA color	CALL

Call Ron or Dick at Milwaukee for AES® COMPUTERS

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ARRL (ARR)

100 1994 Radio Amateur's Handbook	$ 25.00	
105 50 Years of ARRL	4.00	
110 200 Meters and Down (early ham radio)	8.00	
115 AX.25 (packet radio)	8.00	
120 Advanced Class License Manual	8.00	
125 Antenna Book	20.00	
130 Antenna Compendium	10.00	
135 Antenna Compendium II	12.00	
140 Antenna Impedance Matching	20.00	
145 Complete DX'er	12.00	
150 Data Book	15.00	
155 Extra Class License Manual	8.00	
160 FCC Rule Book	9.00	
165 First Steps in Radio	6.00	
170 General Class License Manual	12.00	
175 Gil Cartoon Book	5.00	
180 Grid Locator Atlas	5.00	
185 Hints and Kinks	9.00	
190 Hostage in the Woods	6.00	
195 Introduction to Morse Code cassettes	10.00	
200 Log Book	3.50	
205 Low Profile Amateur Radio	8.00	
210 Morse Code the Essential Language	6.00	
215 Morse Tutor software for IBM	20.00	
220 Night Signals	6.00	
230 Novice Notes: The Book	6.00	
236 Now You're Talking II (new ham)	19.00	
240 Operating Manual	18.00	
251 1994 Passport to Worldband Radio	17.95	
255 QST binder	12.00	
260 RFI-How to Find It & Fix It	15.00	
265 Radiogram message blanks pad	2.00	
270 Repeater Directory	6.00	
275 Satellite Anthology	10.00	
280 Satellite Experimenter's Handbook	20.00	
285 Set 1 5-10 wpm code practice cassettes	10.00	
290 Set 2 10-15 wpm code practice cassettes	10.00	
295 Set 3 15-22 wpm code practice cassettes	10.00	
300 Set 4 13-14 wpm code practice cassettes	10.00	
305 Solid State Design	12.00	

ARRL - continued

	Reg	Sale
310 Technician Class License Manual	6.00	
315 Transmission Line Transformers	20.00	
320 Transmitter Hunting	19.00	
325 U.S. Call Area Map	3.00	
328 Understanding Basic Electronics	17.00	
330 W1FB's Antenna Notebook	10.00	
335 W1FB's Help for New Hams	10.00	
340 W1FB's QRP Notebook	10.00	

On major products ask your salesperson about...

- **Late Breaking "Hot Deals"**
- **Latest Sale Prices**
- **Monthly specials**
- **Coupons, etc.**

Info also available on the **AES® BBS**

1-414-358-3472

New **Flat-Rate Shipping** *details*...p. 156

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All prices & specifications are subject to change without notice. Due to foreign currency fluctuations, promotions, manufacturer's coupons, etc. prices may vary. Please confirm prices before ordering. AES® is not responsible for typographical errors or omissions.

CODES SHOWN NEXT TO PRICES

(T) • Item too large or too heavy for UPS. Truck shipment only. No COD, send payment in advance or use charge card for merchandise; freight charges will be collected upon delivery.

NOTE: Charges for truck shipments from 1-99 lbs are running a minimum of $80.00, plus local destination charges. It is advisable to contact a local freight office for a quotation.

(D) • **DISCONTINUED** by Manufacturer but still available from stock in limited quantities when this price list was published.

(†) • **TEMPORARY LOW PRICE** due to Special Purchase, overstock, etc. Quantities may be limited at price shown.

(Δ) • Item *not* discontinued by Manufacturer but probably will not be available from our stores when present stock sold out.

End of line STORE LOCATION CODES (means Close-out or Special items were at these stores): **(m)** Milwaukee; **(w)** Wickliffe; **(f)** Orlando; **(c)** Clearwater; **(v)** Las Vegas; **(*)** all AES stores

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***NEW!* AES® Credit Card** *details*... p.p. 156-158

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Wickliffe, OH 44092; 28940 Euclid Avenue	(216) 585-7388	1-800-321-3594	(216) 585-1024
Orlando, FL 32803; 621 Commonwealth Avenue	(407) 894-3238	1-800-327-1917	(407) 894-7553
Clearwater, FL 34625; 1898 Drew Street	(813) 461-4267		(813) 443-7893
Las Vegas, NV 89106; 1072 N. Rancho Drive	(702) 647-3114	1-800-634-6227	(702) 647-3412

ARRL - continued

		Reg	Sale
345	World Map	12.00	
350	Yagi Antenna Design	15.00	
355	Your Gateway to Packet Radio	12.00	
356	Your VHF Companion	8.00	
358	Your Packet Companion	8.00	
359	Your RTTY/AMTOR Companion	8.00	

TOMPKINS BOOKS

360	CQ Ghost Ship	$ 5.00	
365	DX Brings Danger	5.00	
370	Death Valley QTH	5.00	
375	Grand Canyon QSO	5.00	
380	Murder by QRM	5.00	
385	SOS at Midnight	5.00	

RSGB PUBLICATIONS

400	RSGB Operating Manual	$ 14.00	
405	Radio Communications Handbook	35.00	
410	VHF/UHF Manual	30.00	

ACE SYSTEMS (ACE)

Opto Iambic	Elec keyer, batt or DC	Δm	$ 59.95	**39**95
Opto Deluxe	Iambic elec keyer	Δm	84.95	**59**95

AIM (AIM)

24-7474P	Precision knife set	Δmwf	$ 17.50	**9**95
24-7735P	Coax stripper; RG-58/59/62		38.25	**19**95
24-7736P	Coax stripper; RG-59/6/8281		38.25	**19**95
24-7739P	Coax stripper; RG-8/11/213		62.85	**29**95
24-8789P	Crimp tool: RG-58/59/62	Δmf	47.50	**24**95
24-9912P	Crimp tool for RG-174	Δmw	47.50	**24**95
24-9960P	Crimp tool; RG-58/59/62	Δmwf	80.19	**39**95
37-208	6-socket wall surge protector	Dmwv	32.85	**14**95
37-503	6-socket surge/EMI/RFI filter		41.85	**29**95
38-305	500ma 3/4.5/6/7.5/9/12vdc adapter		17.85	**12**95
38-312	1.2A 1.5/3/4.5/6/7.5/9/12vdc adapt		49.50	**24**95
38-384	4A power supply, 5A surge		88.50	**39**95
46-221	20K ohms/volt VOM	Dm	29.95	**19**95
48-1921TP	10w 2700rpm 3.62" sq AC fan	Dmf	40.50	**19**95
48-1923TP	6w 1700rpm 3.62" sq AC fan	Dmf	40.50	**19**95
48-3120P	4.68" finger guard	Dmf	2.95	
48-3920P	3.62" finger guard	Dmf	4.05	
48-3250P	4' AC cord w/plug for fan	Dmf	2.95	
64-3UUP	3' RG-58 w/PL-259s		7.00	
64-6UUP	6' RG-58 w/PL-259s		8.00	
64-9UUP	9' RG-58 w/PL-259s		9.00	
64-12UUP	12' RG-58 w/PL-259s		10.00	
64-18UUP	18' RG-58 w/PL-259s		11.00	

ALINCO (ALI)

EBP-6NA	9.6v 450ma nicad batt	Dw	$ 56.95	**39**95
EBP-8NAZ	12v 700ma nicad batt	Δm	83.00	
EBP-9NAZ	7.2v 500ma nicad batt	Δm	59.00	
EDC-2	Cig charging cord; EBP-7NAZ	Δmw	9.00	
EDC-8Z	Mobile DC pwr cable w/filter	Δmwv	20.00	
EDC-11	Extra AC wall cgr for 8NAZ	Δm	24.00	
EMS-1Z	Speaker/mic	Δm	39.00	
DJ-162TD	2.5w 2m FM HT/batt/cgr/holder/TTP	D*		**199**95
EBP-10NA	7.2v 700ma quick charge batt		42.00	
EBP-12NA	12v 700ma quick charge batt		59.00	
EDC-16	Cigarette lighter cable		12.00	
EDC-21	Extra wall cgr for EBP-10NA		18.00	
EDC-22	Wall charger for EBP-12NA		22.00	
EDC-26	DC cord/charger w/filter; EBP-10NA		17.00	
EDH-1	Dry cell battery case		19.00	
EJ-6U	Tone squelch unit		48.00	
EME-4	Ear/microphone w/PTT		33.00	
EME-6	Earphone		14.00	
EME-10	Headset w/VOX/PTT		68.00	
EMS-2Z	Speaker/mic		43.00	
ESC-10	Carrying case; DJ-162T w/EBP-10NA		23.00	
ESC-11	Carrying case; DJ-560T/A, EBP-10NA		23.00	
DJ-F1T	2w 2m FM HT/batt/cgr/TTP		339.00	CALL
DJ-F1T/HP	5w 2m FM HT/batt/cgr/TTP		369.00	CALL
DJ-180T	2w 2m FM HT/batt/cgr/TTP		279.00	CALL
DJ-180TH	5w 2m FM HT/batt/cgr/TTP		299.00	CALL
DJ-560T/A	2w 2m/440 HT/batt/cgr/TTP	Dmv		**299**95
DJ-580T	2.5w 2m/440 FM HT/batt/cgr/TTP		519.00	CALL
EBC-3	Belt clip		3.50	
EBC-5	Shoulder belt w/soft case		53.00	
EBC-6	Mobile bracket for DJ-180T		20.00	

ALINCO - continued

		Reg	Sale
EBP-14N	7.2v 400ma thin nicad batt	62.00	
EBP-16N	7.2v 700ma nicad battery	46.00	
EBP-18N	12v 600ma nicad battery	74.00	
EBP-20N/EBP-26N	Extra 7.2v 700ma; 180/580	51.00	
EBP-22N/EBP-28N	12v 600ma batt; 180/580	78.00	
EBP-24N	7.2v 1200ma batt; DJ-180/580T	77.00	
EDC-24	Wall cgr; 14/16/18/20/22/24N	22.00	
EDC-34	Quick charger	99.00	
EDC-36	Mobile DC power cable w/filter	21.00	
EDC-37	13.8v power cable	8.00	
EDC-43	Cig lighter cable	9.00	
EDC-49	Battery charger; EBP-20/22/24N	22.00	
EDH-5	AA dry cell pack	18.00	
EDH-6/EDH-11	AA alk pack; DJ-180/580T	20.00	
EDH-12	DC jack adapter; DJ-180T	11.00	
EJ-12U	Tone decode unit; DJ-F1T	49.00	
EJ-14U	50 ch memory unit; DJ-180T	22.00	
EJ-15U	200 ch memory unit; DJ-180T	32.00	
EME-4	Ear/microphone w/PTT	33.00	
EME-6	Earphone	14.00	
EME-10	Headset w/VOX/PTT	68.00	
EME-11	Ear/microphone w/PTT/VOX	51.00	
EMS-2Z	Speaker/mic	43.00	
EMS-8Z	Remote speaker/mic	47.00	
ESC-15	Soft case for DJ-F1T	19.00	
ESC-17	Soft case; DJ-580T w/EBP-20N	21.00	
ESC-18	Soft case; DJ-180T w/EBP-20N	21.00	
ESC-19	Soft case; DJ-180T w/EBP-22N	23.00	
ESC-26	Soft case; DJ-580T w/EBP-22/24N	23.00	
DJ-G1T	2m FM HT/batt/cgr/TTP/ch scope	409.00	CALL
EBC-6	Mobile bracket	20.00	
EBP-30N	7.2v 700ma nicad battery	59.00	
EBP-31N	7.2v 1200ma nicad battery	76.00	
EBP-32N	12v 722ma nicad battery	92.00	
EDC-36	Mobile DC power cable w/filter	21.00	
EDC-37	13.8v power cable	8.00	
EDC-52	Quick charger	116.00	
EDC-55	Wall cgr; EBP-30/31/32N	22.00	
EDH-14	Dry cell battery case	20.00	
EJ-16U	Tone squelch unit	57.00	
EME-12	Headset w/earphone/mic/VOX	68.00	
EME-13	Headset w/ear bud/mic/VOX	68.00	
EME-15	Earphone/mic w/VOX	52.00	
EMS-8Z	Remote speaker/mic	47.00	
EMS-9	Speaker/mic	43.00	
ESC-23	Soft case for EBP-30N	21.00	
ESC-24	Soft case for EBP-31N/32N	22.00	
DR-119T	45w 2m FM Xcvr w/TTP mic	Dmwv	419.00	**344**95
DR-130T	50w 2m FM Xcvr w/TTP mic		399.00	CALL
DR-430T	440 FM Xcvr w/TTP mic		479.00	CALL
EJ-19U	Memory expansion unit		34.00	
EJ-20U	Tone squelch unit		45.00	
DR-570T	Dlx 45/35w 2m/440 FM Xcvr/TTP mic		649.00	CALL
DR-592T	45/35w 2m/440FM Xcvr/TTP	Dmwfv		**469**95
DR-600T	45/35w 2m/440 FM Xcvr/TTP mic		759.00	CALL
EDC-20	16' separation mounting kit		44.00	
EJ-7U	Tone squelch unit		67.00	
DR-1200T	25w 2m FM data radio		339.00	CALL
EHM-36A/EMS-10	TTP mic; DR-1200T only		55.00	
DR-1200TH2	25w 2m FM 9600 baud data radio		369.00	CALL

ALPHA DELTA (ALP)

R-T	200w 500 MHz lightning protector	$ 32.95	
	Extra **arc-plug** cartridge for **R-T**	12.95	
R-T/N	200w thru 1 GHz type N protector	39.95	
	Extra **arc-plug** cartridge for **R-T/N**	12.95	
HV	2kw 500 MHz lightning protector	35.95	
	Extra **arc-plug** cartridge for **HV**	15.95	
HV/N	2kw thru 1 GHz type N protector	42.95	
	Extra **arc-plug** cartridge for **HV/N**	15.95	
LT	200w thru 10m 'T' SO-239 protector	22.95	
	Extra **arc-plug** cartridge for **LT** or LT/N	17.95	
Extra **arc-plug** for **CLP**		Δm	9.00	**2**95
Delta-2	500 MHz 2-pos coax switch/protector		49.95	
Delta-2/N	1.3 GHz 2-pos type N switch/protector		64.95	
Delta-4	500 MHz 4-pos coax switch/protector		74.95	
Delta-4/N	1.3 GHz 4-pos type N switch/protector		89.95	
D-4	Extra arc-plug; Delta-2/2N/4/4N		9.00	
DX-A	160-80-40m twin sloper antenna		59.95	

ALPHA DELTA - continued

		Reg	Sale
DX-B	160-80-40-30m 60' sloper ant	69.95	
DX-CC	80-10m 5-band 82' no trap, no tuner dipole	99.95	
DX-DD	80-40m 82' Delta Dipole antenna	79.95	
DX-EE	40-10m 4-band 40' no trap, no tuner dipole	89.95	
DX-SWL	AM broadcast-13m 60' SWL sloper ant	69.95	
DX-SWL-S	90-13m 40' SWL sloper ant	59.95	

AMECO PUBLICATIONS (AME)

4-01	Code Course Instruction Booklet	$ 1.50	
6-01	Mastering the Morse Code	2.50	
12-01	General Class FCC Test Manual	5.95	
17-01	Extra Class FCC Test Manual	5.95	
23-01	Novice Theory Course	6.95	
26-01	Advanced Class FCC Test Manual	5.95	
27-01	Novice Class FCC Test Manual	5.95	
28-01	Technician Class FCC Test Manual	5.95	
78-01	Codeless Technician FCC Test Manual	9.95	
102-01	Amateur Radio Theory Course	7.95	
EN-1	Novice Class Exam	1.95	

CODE COURSES - CASSETTE TAPES

100-T	Junior code tape, 0-7½ wpm	$ 5.95	
101-T	Senior code tapes, 0-18 wpm	10.95	
103-T	Advanced code tape, 8-18 wpm	5.95	
104-T	Extra Class code tape, 20 wpm	5.95	
105-QT	General Class QSO code course tape	5.95	
106-QT	Extra Class QSO code course tape	5.95	
107-PC	Morse Code Course for IBM	19.95	
NP-1	Novice Code & Theory Course	10.95	

CODE PRACTICE OSCILLATORS & CODE KEYS

OCM-2K	Code oscillator & CW monitor kit	$ 19.95	
OCM-2W	Wired oscillator & CW monitor	24.95	
K-1	Bakelite type key	7.95	
K-4	Brass type key	12.95	

PREAMPLIFIERS

TPA	Tunable preamp & indoor active ant	$ 76.95	**69**95
P-9T	Power supply for TPA	9.50	
PT-3	2-54 MHz transceiver preamp	124.95	**119**95
P-12T	Power supply for PT-3	9.95	

MULTIMETER

M-300	20K ohms/volt multimeter	Δmf	$ 19.95	**14**95

FILTERS

HP-75T	75 ohm high-pass filter	$ 12.95	
HP-300T	300 ohm high-pass filter	12.95	

AMERITRON (AMR)

AL-80B	1kw PEP out linear (3-500Z)	1195.00	**1069**
AL-82	1.5kw PEP out linear (2 3-500Zs)	2095.00	**1769**
AL-811	600w PEP out linear (3 811As)	649.00	**589**95
AL-811H	800w PEP out linear (4 811As)	795.00	**719**95
AL-1200	1.5kw PEP out linear (3CX-1200A7)	2195.00	**1829**
AL-1500	Linear amplifier (8877)	2695.00	**2249**
ALS-500M	600w PEP out solid state mob amp	799.00	**679**95
ALS-600	700w PEP out solid state amp w/ps	1299.00	**1099**
ATR-15	1.5kw antenna tuner	399.00	**359**95
ICP-120	120v inrush protector	79.00	
ICP-240	240v inrush protector	79.00	
QSK-5	Stand alone T/R switch	349.00	**319**95
QSK-5PC	PC board kit; T/R switch	249.00	**229**95
CF-5	Cooling fan for QSK-5	39.95	
RCS-4	4-pos wireless remote coax switch	134.00	**124**95
RCS-8V	160-2m 5-pos remote coax switch	149.00	**139**95

Note: RCS-8V requires 8-wire control cable.

AMSOFT (AMS)

World of Ham	Radio IBM shareware	Δm	$ 79.95	**39**95

ANLI (ANL)

A-1000	2m/440 8.5/11.8db 17.5' base ant	$199.95	**169**95
AL-800	2m/440 BNC rubber duck antenna	37.90	
RD-8	2m/440 6.5" BNC whip	19.95	
RD-78	2m/440 15" BNC whip	23.90	
S-1	2m/440 2.15/3.2db 14" whip	23.90	
CM-1	Clip mt w/angle adjustable BNC, coax	18.95	
CM-2	Clip mt w/BNC, coax	16.95	
WA-1	Window/sun roof clip mt w/BNC, coax	19.95	
AT-2	2m/440 3/5db NMO mt mobile ant	39.95	
AT-2/Plus	2m/440 4.1/6db NMO mt mob ant	49.95	
AT-2A	2m/220 3/3.8db NMO mt mobile ant	43.95	

ANLI - continued

Model	Description	Reg	Sale
AT-2A/Plus	2m/220 4.1/4.8 NMO mt mob ant	54.95	
AT-2B	2m/440 3/5.6db 22" NMO mobile ant ..	39.95	
AT-3	2m/440 2.15/3db 19" UHF mt mob ant .	24.45	
AT-4/NMO	2m/440 3/5.5db 38" NMO mob ant	43.95	
AT-4/UHF	2m/440 3/5.5db 38" UHF mt mob ant	39.95	
MC-1/NMO	NMO-style magnet mt w/coax ...	24.95	
MC-1/UHF	UHF-style magnet mt w/coax	21.95	
TA-1/NMO	NMO-style trunk mt w/coax	24.95	
TA-1/UHF	UHF-style trunk mt w/coax	24.95	
SB-152	12vdc 6.5A port batt power pack	59.95	
SB-752	12vdc 8.5A port batt power pack	69.95	
SB-791	5A ps w/cig outlet; not for radio Δmv	29.95	

Antenna Specialists (ASP)

VHF/UHF ANTENNAS

Model	Description	Reg	Sale
AP-143	2m 3db on glass cellular look-alike ant	$ 65.00	59^{95}
APR151.3	2m 3db on glass antenna	49.25	44^{95}
AP220.3G	220 3db on glass antenna ....Dm	49.25	39^{95}
AP-453	440 on glass cellular look-alike ant ..	65.00	59^{95}
APR450.5G	440 5db on glass antenna	54.50	49^{95}
KAV-382	On glass replacement mtg kit	8.25	
ASPC201L	108-512 MHz ¼ wv ⅜ " hole ant	22.75	

HOLE PLUGS

Model	Description	Reg	Sale
ASC-34	For 1⁵⁄₁₆" hole	$ 3.15	
ASC-35	For ¾" hole	2.10	
ASC-37	For ⅜" hole	2.10	
ASC-39	For ⅞" hole	2.10	

Antenna Supermarket (ANT)

Model	Description	Reg	Sale
Eavesdropper*	60-11m trap dipole SWL ant ...	$ 79.95	
	*Specify **SO-239** or **twin**-lead		
SWL Sloper	120-11m SWL antenna	79.95	

ARTSCI (ART)

Title	Reg	Sale
Amateur Handbook	$ 14.95	
Lost Users Manuals	19.95	
Riding the Airwaves with Alpha & Zulu	14.95	
US Repeater Guide	9.95	

ASTATIC (AST)

Model	Description	Reg	Sale
10DA-L	Dynamic mic head (no stand or cable)	$ 59.99	49^{95}
D-104-L	Crystal mic head (no stand or cable)	42.99	39^{95}
T-UG9	Amplified desk stand	50.00	
T-UG9-D104	Amp mic, 6-wire w/stand	92.99	79^{95}
MC-320	Crystal mic cartridge for D-104	19.99	
MC-321	Ceramic mic cartridge for D-104	19.99	

ASTRON (ASR)

Model	Description	Reg	Sale
RS-4L	3A ps, 4A surge, w/cig lighter socket ..	$ 57.95	49^{95}
RS-7A	5A power supply, 7A surge	68.95	59^{95}
RS-10A	7.5A power supply, 10A surge	85.95	69^{95}
RS-12A	9A power supply, 12A surge	99.95	79^{95}
RS-12S	9A ps, 12A surge, w/speaker	112.95	89^{95}
RS-20A	16A power supply, 20A surge	121.95	99^{95}
RS-35A	25A power supply, 35A surge	197.95	149^{95}
RS-50A	37A power supply, 50A surge	285.95	219^{95}
RS-70A	57A power supply, 70A surge	339.95	259^{95}
RS-20M	16A ps w/meters, 20A surge	144.95	119^{95}
RS-35M	25A ps w/meters, 35A surge	204.95	169^{95}
RS-50M	37A ps w/meters, 50A surge	314.95	239^{95}
RS-70M	57A ps w/meters, 70A surge	372.95	289^{95}
VS-20M	Variable 16A ps/meters, 20A surge ..	170.95	139^{95}
VS-35M	Variable 25A ps/meters, 35A surge ..	238.95	189^{95}
VS-50M	Variable 37A ps/meters, 50A surge ..	330.95	259^{95}
RM-35M	25A rack mt ps/meters, 35A surge ..	318.95	249^{95}
RM-50M	37A rack mt ps/meters, 50A surge ..	354.95	279^{95}
RM-60M	50A rack mt ps/meters, 55A surge ..	467.95	359^{95}
12/115	200w solid state 12vdc-115vac inverter .	79.95	59^{95}
2412	9A 22-32vdc to 13.8vdc converter	73.95	59^{95}
2412-20	16A 22-32vdc to 13.8vdc converter	103.95	79^{95}

AZIMUTH (AZI)

Model	Description	Reg	Sale
DKS-22/7294	SS desk stand; TWR-3 ....Dm	$ 9.95	2^{95}
BP-3/7826	Nicads (3 AAA); 2 needed; ALT-6 Dm	7.95	5^{95}
CA-2/7192	Vinyl carrying case; ALT-6 ....Dm	12.95	2^{95}
DSK/7194	Stainless desk stand; ALT-6 .....Dm	15.95	4^{95}
FML/7197	Flat stainless mtg plate; ALT-6 .Dm	12.95	3^{95}
PS-12/7822	AC power adapter/cgr; ALT-6 .Dm	9.95	3^{95}
RG-3/7830	Rain collector, self dump; ALT-6 Dm	49.95	29^{95}

AZIMUTH - continued

Model	Description	Reg	Sale
AWZ	WAZ QSL library ....Δm	19.95	16^{95}
GC-24	Large LCD 24-hour clock ....Δm	29.95	

B & K (B&K)

AUDIO TEST INSTRUMENTS

Model	Description	Reg	Sale
2005A	RF generator	$275.00	234^{95}
2009	MTS TV-stereo generator ....D	399.00	339^{95}

CAPACITANCE METERS

Model	Description	Reg	Sale
810A	200 pF to 20 mF capacitance meter	$134.00	114^{95}
815	Tester (cap/res/Hfe/diode/batt)	115.00	96^{95}
820	.1pF to 1F capacitance meter	279.00	239^{95}
830	200 pF to 200mF autoranging meter	325.00	279^{95}
875A	Digital LCR meter	199.00	169^{95}
878	Universal hand-held LCR bridge	275.00	229^{95}

COUNTERS

Model	Description	Reg	Sale
1803C	100 MHz frequency counter	$209.00	179^{95}
1804A	550 MHz frequency counter ....Dm	299.00	219^{95}
1806	100 MHz multi-function counter	249.00	214^{95}
1807	1.3GHz 1 ppm frequency counter	299.00	259^{95}
1823	175 MHz universal counter	399.00	339^{95}
1856	1.3 GHz frequency counter ....Dm	499.00	359^{95}
1856A	1.3 GHz 1 ppm multi-function ctr	499.00	429^{95}

CRT RESTORER/ANALYZERS

Model	Description	Reg	Sale
480	CRT restorer/analyzer	$739.00	629^{95}
490	Tri Dynamic restorer/analyzer	1049.00	899^{95}

DIGITAL PRODUCTS

Model	Description	Reg	Sale
DP-21	Digital logic probe	$ 34.00	29^{95}
DP-31	Digital pulser probe	39.00	34^{95}
DP-51	Digital probe	95.00	84^{95}
DP-101	Digital pulsing probe	111.00	94^{95}

GENERATORS

Model	Description	Reg	Sale
3001	Audio generator	$ 79.00	66^{95}
3011B	2 MHz function generator w/dig disp ..	269.00	226^{95}
3017A	2 MHz sweep/function generator	339.00	286^{95}
3022	Sweep/func generator w/freq counter ...	479.00	399^{95}
3026	5 MHz sweep/function gen w/dig disp ..	629.00	539^{95}
3030	.001 Hz-5 MHz sweep/function gen ....D	865.00	699^{95}
3040	Universal func gen w/freq counter	1195.00	999^{95}

HIGH VOLTAGE PROBE

Model	Description	Reg	Sale
HV-44	Direct-reading 40kV DC probe	$ 99.00	84^{95}

ISOLATION TRANSFORMER

Model	Description	Reg	Sale
TR-110	Isolation transformer	$199.00	169^{95}

MULTIMETERS (ANALOG)

Model	Description	Reg	Sale
114	20,000 ohms/volt analog multimeter	$ 42.00	39^{95}
117	Pocket size analog multitester	13.00	
214	50,000 ohms/volt analog multimeter	55.00	46^{95}
300	Insulation tester	129.00	109^{95}
PR-21	Test probe assembly for 290 ....Dm	45.00	14^{95}

MULTIMETERS (DIGITAL)

Model	Description	Reg	Sale
340A	300A multi-function clamp-meter	$109.00	94^{95}
350A	1000A multi-function clamp-meter	139.00	119^{95}
388A	Test Bench DMM, 0.5% accuracy	119.00	104^{95}
389	Test Bench DMM, 0.25% accuracy	139.00	119^{95}
390	Test Bench DMM, 0.1% accuracy	159.00	134^{95}
391	Test Bench DMM, 0.05% accuracy	179.00	149^{95}
2700	Credit-card size bargraph DMM	33.00	29^{95}
2701	3½-dig autoranging dig multimeter Dm	59.00	49^{95}
2703A	Tool kit DMM, basic model, 0.5%	39.00	34^{95}
2704A	Tool kit DMM w/cap/transistor/diode ..	59.00	49^{95}
2706	Tool kit DMM, 2704A plus temperature .	79.00	69^{95}
2707	Tool kit DMM, 2704A plus logic & freq ..	89.00	76^{95}
2802B	3½-dig probe type multimeter ....Dm	64.00	54^{95}
2831A	Digital bench multimeter	299.00	249^{95}
2832	3½-dig 0.5% lab multimeter	209.00	179^{95}
2833	4½-dig 0.05% true RMS multimeter	400.00	339^{95}
2835	3¾-dig 0.5% bench type LCD DMM	270.00	229^{95}
2860	3½-dig 0.5% ruggedized DMM	99.00	84^{95}
2907	3½-dig 0.1% true RMS, cap, logic ...Dm	195.00	149^{95}
2911	3¾ -dig 0.5% analog/bar meter ......Dm	89.00	64^{95}
2912	3¾-dig 0.3% analog/bargraph meter .D	149.00	119^{95}

OSCILLOSCOPES

Model	Description	Reg	Sale
1422	20 MHz mini scope	1395.00	1189
1443	40 MHz port scope/batt/case ....D	1695.00	1439
1541B	40 MHz 6" dual trace scope	845.00	719^{95}
2120	20 MHz dual trace oscilloscope	549.00	469^{95}
2125	20 MHz dual time base oscilloscope	646.00	549^{95}
2160	60 MHz dual trace delayed sweep	1099.00	929^{95}

B & K - continued

Model	Description	Reg	Sale
2190A	100 MHz three trace delayed sweep	1599.00	1359
2522A	Digital storage oscilloscope	1099.00	929^{95}
2560	60MHz DSO, cursors/readouts/RS232 ...	2395.00	2029

POWER SUPPLIES

Model	Description	Reg	Sale
1604	Portable isolated AC supply	$104.00	89^{95}
1610A	0-30V, 0-1A power supply	229.00	194^{95}
1611A	0-50V, 0-2A power supply	309.00	264^{95}
1630	0-30V, 0-3A power supply ....Dm	315.00	249^{95}
1630A	0-30V, 0-3A power supply	315.00	269^{95}
1635A	0-30V, 0-3A digital supply	380.00	329^{95}
1646	0-16V, 0-10A power supply	499.00	429^{95}
1651	Power supply; (2) 0-24vdc, .5A; 5V, 4A .	429.00	359^{95}
1653	0-150V, 2A isolated AC ps	299.00	259^{95}
1655	0-150V, 3A isolated AC ps/leak tester ..	499.00	429^{95}
1660A	(2) 0-30V, 2A; (1) 4-6.5V, 5A ps	649.00	549^{95}
1686	High current DC power supply	199.00	169^{95}
1688	3-14VDC, 25A non. power supply	299.00	259^{95}

SEMICONDUCTOR TESTERS

Model	Description	Reg	Sale
510	Portable transistor tester	$239.00	209^{95}
520B	Industrial transistor tester	399.00	339^{95}
530	Lab quality semiconductor tester ....D	749.00	639^{95}
540	Component tester ....D	1150.00	969^{95}
541	Component comparator ....Dm	449.00	349^{95}
545	Circuit analyzer analog signature	2950.00	2499
560A	Programmable PC board tester	3500.00	2969
AK-560A	Software package for 560A	495.00	399^{95}

TELEPHONE TEST INSTRUMENTS

Model	Description	Reg	Sale
1045A	Telephone product tester	$599.00	499^{95}
1050	Telephone product analyzer	2260.00	1899

VIDEO TEST INSTRUMENTS

Model	Description	Reg	Sale
1211D	Portable color generator	$235.00	199^{95}
1221	Portable NTSC video generator ....D	369.00	309^{95}
1249A	NTSC generator w/RGB	569.00	489^{95}
1251	NTSC signal generator	1195.00	999^{95}
1260	Deluxe NTSC signal generator	1995.00	1699

ACCESSORIES

Model	Description	Reg	Sale
PR-28	HV multimeter probe w/std dual banana .	$ 49.00	44^{95}
PR-32	RF detector/demod scope probe w/BNC	49.00	44^{95}
PR-37G	Gray dlx 10:1 direct BNC probe .....Dm	54.50	49^{95}
PR-37R	Red dlx 10:1 direct BNC probe .....Dm	54.50	49^{95}

Other accs available on special order. B & K stocked only at Milwaukee. Call Ron Glisch for B & K.

B & W COAX SWITCHES (B&W)

Model	Description	Reg	Sale
CSR-5G	5-position, side connectors	$ 51.50	49^{95}
CS-3G	3-position, for desk/wall mounting	40.50	39^{95}
CS-6G	6-position, for desk/wall mounting	51.50	49^{95}

Note: Above switches provide grounding of unused terminals, & are supplied w/face plates & knobs.

Model	Description	Reg	Sale
CR-115	Coax ant relay - 48 to 130vac	42.50	

LOW-PASS FILTERS

Model	Description	Reg	Sale
FL-10/1500	1.5-30 MHz, 1kw, 52 ohms	$ 41.50	
FL-10/1500/70	1.5-30MHz/1kw/72 ohm ...Dm	55.00	24^{95}

ANTENNAS

Model	Description	Reg	Sale
AP-10	57" portable 40/20/15/10/6/2m ant ...	$ 69.95	
AT-55	40/20/15/10m 55' trap antenna	79.95	74^{95}
AT-55K	As above, but kit ....Δmwfv	69.50	59^{95}
AT-110	80/40/20/15/10m 110' trap antenna	89.50	84^{95}
AT-110K	As above, but kit	76.95	72^{95}
AS-160	160/80/40/20m 137' trap dipole	149.50	139^{95}
AS-80	80/40/20m 78' trap dipole	115.75	109^{95}
AS-40	40/20/15/10m 40' trap dipole	149.50	139^{95}
AS-20	20/15/10m 23' trap dipole	115.75	109^{95}
AXS-160	160/30m 96' trap dipole	115.75	109^{95}
AXS-80	80/40/15m 64' trap dipole	115.75	109^{95}
AC-3.5-30	80-10m 8-band 90' dipole	198.00	179^{95}
AC-1.8-30	Continuous 1.8-30 MHz antenna ..	198.00	179^{95}
BWD-1.8-30	1.8-30 MHz 90' folded dipole	198.00	179^{95}
AV-25	80/40/30/20/15/10m 25' vertical Δmf	143.50	109^{95}
AR-25	Radial kit for AV-25 ....Δm	26.95	19^{95}
ASW-5	75" portable 49-11m SWL ant ..Δmfv	52.25	9^{95}
VS-300A	300w 160-10m antenna tuner	111.00	99^{95}

BELDEN (BEL)

52 OHM COAXIAL CABLE

Model	Description	Reg	Sale
8216	RG-174 (sub-miniature) ....per ft.		26¢

BELDEN - continued

		Reg	Sale
8216	100 ft. Roll	37.29	24.95
8216	500 ft. Roll	129.87	89.95
8216	1000 ft. Roll	259.74	169.95
9201	RG-58 (solid center) per ft.		20¢
9201	100 ft. Roll	29.74	18.95
9201	500 ft. Roll	109.89	69.95
9201	1000 ft. Roll	216.45	129.95
8240	RG-58U (solid center) per ft.		26¢
8240	100 ft. Roll	38.20	24.95
8240	500 ft. Roll	131.00	89.95
8240	1000 ft. Roll	262.00	169.95
8259	RG-58AU (stranded center) per ft.		29¢
8259	100 ft. Roll	43.00	26.95
8259	500 ft. Roll	137.00	89.95
8259	1000 ft. Roll	276.00	169.95
8219	RG-58AU (stranded, foam) per ft.		33¢
8219	100 ft. Roll	57.25	29.95
8219	500 ft. Roll	155.00	99.95
8219	1000 ft. Roll	387.50	189.95
8262	RG-58C (non-contaminating) per ft.		36¢
8262	100 ft. cut		32.95
8262	500 ft. Roll	173.00	119.95
8262	1000 ft. Roll	346.00	219.95
9258	RG-8X (stranded, foam) per ft.		36¢
9258	100 ft. Roll	81.25	32.95
9258	500 ft. Roll	217.56	99.95
9258	1000 ft. Roll	490.00	189.95
8237	RG-8U per ft.		64¢
8237	100 ft. Roll	102.00	59.95
8237	500 ft. Roll	390.00	239.95
8214	RG-8U (foam) per ft.		59¢
8214	100 ft. Roll	101.00	49.95
8214	500 ft. Roll	452.00	229.95
8214	1000 ft. Roll	898.00	429.95
9913	RG-8U (low loss) 100 ft. Roll	113.00	59.95
9913	250 ft. Roll	244.00	129.95
9913	500 ft. Roll	486.00	229.95
9251	RG-8A (non-contaminating) per ft.		87¢
9251	100 ft. Roll	132.09	77.95
9251	500 ft. Roll	492.84	299.95
8267	RG-213 (non-contaminating) per ft.		76¢
8267	100 ft. cut		66.95
8267	500 ft. Roll	597.18	279.95
8242	RG-9U (double shielded) per ft.,m		4.95
8242	100 ft. Roll,m	715.00	349.95

72 OHM COAXIAL CABLE

8241	RG-59U (72 ohm, solid center) per ft.		28¢
8241	100 ft. Roll	44.00	24.95
8241	500 ft. Roll	123.00	79.95
8241	1000 ft. Roll	246.00	149.95
8238	RG-11 (72 ohm, stranded center) per ft.		79¢
8238	100 ft. Roll	124.32	69.95
8238	500 ft. Roll	470.64	279.95
8213	RG-11 (72 ohm, solid, foam) per ft.		69¢
8213	100 ft. cut		59.95
8213	500 ft. Roll	360.00	239.95

ROTOR CABLE

8484	4-wire; 4-20 ga; U-105 per ft.		28¢
8484	100 ft. Roll	48.00	24.95
8484	500 ft. Roll	185.00	99.95
8484	1000 ft. Roll	370.00	189.95
8448	8-wire; 2-18, 6-22 ga; CD-45/HAM-IV per ft.		46¢
8448	100 ft. Roll	103.75	42.95
8448	500 ft. Roll	412.50	159.95
8448	1000 ft. Roll	820.00	319.95
9405	8-wire; 2-16, 6-18 ga; HAM-IV/T²X per ft.		59¢
9405	100 ft. cut		54.95
9405	500 ft. Roll	585.00	249.95
9405	1000 ft. Roll	1167.50	489.95

ANTENNA WIRE

8000	No. 14 stranded ant wire per ft.		20¢
8000	100 ft. Roll	30.50	16.95
8000	1000 ft. Roll	275.00	149.95

No. 8 ALUMINUM GROUND WIRE

8018	Multiples of 50 ft. each	$ 19.00	12.95

BELDEN - continued

		Reg	Sale
8018	500 ft. Roll	150.00	99.95

Note: All above roll pricing is for rolls as shown only; all other lengths, even if more than roll length shown or a multiple of roll length shown, are sold at the per ft. price.

COILED MICROPHONE CABLE

8497	1 shielded, 2 unshielded (rubber)	$ 16.25	

FOAM COAX w/PL-259s ON BOTH ENDS

9349	3' RG-58AU foam	$ 19.32	14.95
9350	15' RG-58AU foam	21.63	16.95
9347	20' RG-58AU foam, 1 PL-259	19.32	14.95
9352	50' RG-58AU foam	32.13	24.95
9354	50' RG-8U foam	60.90	44.95
9355	75' RG-8U foam	84.00	59.95
9356	100' RG-8U foam	101.85	79.95

BELMERIT (BLM)

DM-10S	3½-digit digital multimeter	$ 24.95	
DM-3000	Wide range digital multimeter	49.95	
DM-3050	Wide range dig multimeter/freq test	59.95	

BENCHER (BEN)

BY-1	Iambic keyer paddle w/black base	$ 72.95	69.95
BY-2	Iambic keyer paddle w/chrome base	89.95	84.95
BY-3	Iambic keyer paddle, gold plated	249.95	219.95
BY-4	Iambic paddle/blk base/gold components	149.95	129.95
ST-1	Single lever keyer paddle, black base	72.95	69.95
ST-2	Single lever keyer paddle, chrome base	89.95	84.95
ST-3	Single lever keyer paddle, gold plated	249.95	219.95
ST-4	Single lever paddle/blk base/gold components	149.95	129.95
RJ-1	Dlx hand key w/navy knob/black base	69.95	
RJ-2	Dlx hand key w/navy knob/chrome base	79.95	
ZA-1A	3.5-30 MHz 1:1 balun	34.95	
HWK	Balun hardware kit for 2" boom	8.95	
YA-1	1kw low pass filter	54.95	

BIRD (BIR)

43	Thruline Directional wattmeter, SO-239s	$230.00	
4300-400	Peak reading conversion kit	115.00	
43P	Peak reading directional meter, SO-239s	345.00	
4431	Wattmeter, variable RF tap, SO-239s	405.00	
	Elements (Table 1) 50H-1000H each	76.00	
	Elements (Table 1) 2500H, 5000H each	110.00	
	Elements (Table 1) 25-1000 MHz each	61.00	
	Low-power elements (Table 2) each	82.00	

TABLE 1 Standard Elements

Frequency Bands (MHz)

Power Range	2-30	25-60	50-125	100-250	200-500	400-1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

TABLE 2 Low-Power Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
60-80 MHz	060-1	60-80 MHz	060-2
80-95 MHz	080-1	80-95 MHz	080-2
95-125 MHz	095-1	95-125 MHz	095-2
110-160 MHz	110-1	150-250 MHz	150-2
150-250 MHz	150-1	200-300 MHz	200-2
200-300 MHz	200-1	250-450 MHz	250-2
275-450 MHz	275-1	400-850 MHz	400-2
425-850 MHz	425-1	800-950 MHz	800-2
800-950 MHz	800-1		

CC-1	Carrying case	41.00	
EC-1	Element case	32.00	
80F	5w dummy load w/type N female	69.00	
80M	5w dummy load w/type N male	69.00	
8080	25w dummy load w/type N male QC	98.00	
8085	50w dummy load w/type N male QC	140.00	
4273	1.5-35 MHz variable RF sig sampler*	120.00	
4273-100	For Bird equipment installation	130.00	
4275	20-1000 MHz variable RF sampler*	115.00	

*2 QC connectors required - not included

BIRD - continued

		Reg	Sale
4275-100	For Bird equipment installation	130.00	
4304A	25-1000 MHz 500w wattmeter	470.00	

QUICK CHANGE CONNECTORS (QC)

4240-050	UHF female (SO-239) each	$ 8.00	
4240-179	UHF male (PL-259) each	41.00	
4240-062	Type N female each	8.00	
4240-063	Type N male each	17.00	
4240-125	BNC female each	17.00	
4240-132	BNC male each	49.00	

Other Bird items available on special order

BUCKMASTER (BUC)

HamCall	CD-ROM ham listings; IBM/Mac	$ 50.00	

BUTTERNUT (BUT)

HF-6VX	80/40/30/20/15/10m 26' vert ant		169.95
HF-9VX	80/40/30/20/17/15/12/10/6m vert		209.95
A17-12	17 & 12m kit for HF-6VX		44.95
CPK	Counterpoise kit		49.95
MPS	Mounting post sleeve		9.95
RMK-II	Roof mounting kit w/radials		69.95
STR-II	Radial kit only		44.95
TBR-160S	160m resonator for HF-6VX		69.95
HF-2V	80/40m 32' vertical		159.95
30-MRK	30m resonator for HF-2V		44.95
TBR-160S	160m resonator		69.95
HF-5B	2 el 20/17/15/12/10m butterfly beam		259.95
10-11	2 el butterfly beam for 10 & 11m		119.95

CES (CES)

410	Personal Patch interconnect	$250.00	189.95
SSI-68	Simplex autopatch	460.00	299.95
SDI-50	Dlx splx/dplx autopatch/rptr controller	760.00	489.95

CQ (CQX)

Buyers Guide		$ 4.95	

CAMBRIDGE (CAM)

The Art of Electronics (book)		$ 59.95	

CIRCUIT WORKS (CIR)

Conductive Pen		$ 10.95	

CLOCKS

AEA	World Clock	$ 25.00	
BMI	972A 12" 12-hour wall clock	37.95	
BMI	972AD 14" 12/24-hour wall clock	39.95	
BMI	973A 12" 24-hour wall clock	59.95	49.95
MFJ	105B 24-hour quartz wall clock	19.95	
MFJ	107B 24-hour digital clock	9.95	
MFJ	108B 24/12-hour dual disp digital clock	19.95	
MFJ	112 Deluxe world map clock	24.95	

COAX SEAL (UNV)

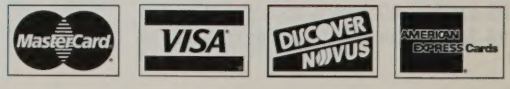
104	½" x 60" coax seal	$ 2.49	

COMET (CMT)

MOBILE ANTENNAS

B-10	2m/440 2.15db 12" cell look-alike ant	$ 38.95	
B-10NMO	2m/440 2.15db 12" cell look-alike NMO	38.95	
B-20	2m/440 2.15/5db 30" cell look-alike ant	54.95	49.95
B-20NMO	2m/440 2.15db/5db 30" cell look NMO	54.95	49.95
CA-28HR	10m 7' fold-over mobile ant .Dmwv	69.95	49.95
CA-214W	2m/220 3' 1.7/3.4db mobile ant	62.95	59.95
CA-220JR	220 3.4db 2' 9" fold-over ant ..Dmv	35.25	24.95
CA-220MR	220 4.2db 3' 3" fold-over ant	44.75	
CA-430HG	440 5db 2' 5" mobile ant .....Dmv	44.95	39.95
CA-2405	2.4 GHz 7db 17" fg type N antenna	50.95	
CA-HV	40/15/10/6/2m 5' 10" mobile ant	129.95	119.95
L-14	20m loading coil for CA-HV	29.00	
CHL-21J	2m/440 0/2.15db 12" mob ant .Dmv	29.95	24.95
CHL-23J	2m/440 2.15/3.8db 20" mob Dmwfv	34.95	29.95
CHL-350	10/6m 0/2.15db fold-over 7' ant	71.50	64.95
CMW-202N	900 MHz 5.1db 18" type N ant	39.95	

NEW! AES® Credit Card details... p.p. 156-158



COMET - continued

	Reg	Sale
CX-224 2m/220/440 2.15/3.2/5.5db 42" mobile ..	79.95	74.95
CX-224NMO 2m/220/440 2.15/3.2/5.5db 42" NMO ...	79.95	74.95
CX-801 2m/440/1.2 3/6.8/9.6db 39" N Dmwfv	89.95	69.95
CX-809P 2m/440/cell 3/6/8.4db 2'11" fold Dmwv	72.95	59.95
FJ-15S 6m/2m/440 2.15/4.5/72.db 5' mobile	89.95	84.95
FL-7HA 40m 40" mobile antenna	72.95	66.95
FL-14HA 20m 37" mobile antenna	72.95	66.95
FL-28HA 10m 33" mobile antenna	72.95	66.95
FL-50HA 6m 33" mobile antenna	72.95	66.95
FL-62S 2m/440 3.5/6.2db 3' 5" mobile ant ...	79.95	74.95
FL-67S 2m/440 4.5/7.2db 4' 11" mobile	96.95	89.95
FL-95SN 2m/440/1.2 2.8/6/8.4db N ...Dmwfv	82.95	59.95
FS-74B 440/1.2 black 5.1/7.2db 22" N mob ..	79.95	74.95
FS-92B 2m/440/1.2 2.1/4.1/6.8 23" type N ...	79.95	74.95
HA-4S 40/15/12/10m 4' 5" mobile ant	179.95	159.95
L-14HS 20m loading coil for HA-4S	29.95	
NCG-1422M 2m/220 2.15/3.4db 3' mob ..Dm	66.95	49.95
SB-2 2m/440 2.15/3.8db 18" mobile ant	35.95	
SB-2NMO 2m/440 2.15/3.8db 18" NMO ant ..	35.95	
SB-5 2m/440 3/5.5db 38" mobile antenna	58.95	54.95
SB-5NMO 2m/440 3/5.5db 38" NMO antenna.	58.95	54.95
SB-7 2m/440 4.5/7.2db 4' 7" mobile ant	82.95	77.95
SB-7NMO 2m/440 4.5/7.2db 4' 7" NMO ant ...	82.95	77.95
SB-25 2m 4.1db 4' 8" mobile antenna	49.95	
SB-25NMO 2m 4.1db 4' 8" NMO mobile ant ..	49.95	
SB-44 440 5db 29" mobile antenna	44.95	
SB-83 2m/440/cell 3/6/8.4db 35" type N ant	72.95	66.95
SB-94 2m/440/1.2 2.15/5.1/7.2db 24" N ant	72.95	66.95
SB-97 2m/440/1.2 3/6.8/9.6db 39" type N	84.95	79.95
SB-123 1.2GHz 7.2db 24" type N mobile ant .	54.95	
WP-57 2m/440 2.15/5.2db 30w on glass ant .. Dm	129.95	89.95
WP-75B 440/1.2 4.9/6.5db 30w on glass BNC .. Dmv	144.95	99.95
WP-75N 440/1.2 4.9/6.5db 30w on glass N .....Dv	144.95	99.95

MOBILE MOUNTS, ETC

3D4M Mobile mt, 13' coax w/UHF connectors	$ 23.95	
3D4N Mobile mt, 13' coax w/type N	24.95	
3D5M Mobile mt, 16.5' coax w/UHF connectors	25.95	
5D4N Roof mount, 13' coax w/type N	29.95	
AD-10N N-NMO mount adapter	17.95	
AD-15M UHF-NMO mount adapter	17.95	
BMG-BB Med duty black mag mt, BNC/BNC ..	39.95	
BMG-M Med duty black mag mt w/UHF conn .	42.95	
CA-MS1 Mag mt only, no coax; add 3D4M, etc	24.95	
CK-5M Dlx 13' cable w/UHF connectors	37.95	
CK-5M5 Dlx 16.5' cable w/UHF connectors	39.95	
CK-5N Dlx cable assembly w/type N	39.50	
GR-5M Dlx tnk lip mt w/ coax; matches SB	64.95	
GR-5N Dlx N tnk lip mt w/ coax; matches SB .	65.95	
MG-SRB Med duty mag mt w/UHF/BNC	38.95	
MG-SRM Med duty mag mt w/UHF connectors	36.95	
MS-3FVMM Std duty mag mt w/UHF connectors .	39.95	
MS-3FVNN Std duty mag mount w/type N	42.95	
MS-5LXMM Hvy duty mag mt w/UHF connectors ..	56.95	
MS-5LXNN Hvy duty magnet mount w/type N .	59.90	54.95
RS-9 Trunk lip mount, no coax	13.95	
RS-20 Gtr mt for small/med ants, no coax	29.95	
RS-21 Adj 360 degree hatch/tnk mt, no coax	29.95	
RS-25 Adj pipe clamp mount, no coax	32.95	
RS-80 Adjustable gutter mount, no coax	29.95	
RS-81 Adj trunk/hatch mount, no coax	29.95	
RS-820 Low profile trunk lip mount, no coax .	34.95	
RS-850 Lug rack/to 1.75" pipe mt, no coax ..	39.95	
TS-1M Trunk lip mt w coax	44.95	
TS-5M Low prof tnk lip mt w/dlx cable ...Dmwf	54.95	49.95
TS-103NN Trunk lip mt w/coax, type N	39.35	
TS-106NN Dlx tnk lip mt/coax, type N .Dmwfv	55.95	49.95
WS-1M Window clip mt w/UHF connectors	61.95	
5D-NJC Female N connector for 5D coax ..Δm	7.95	5.95
10D-FB Low loss 13.1mm (½") coax ...100m,Δm	426.00	289.95
10D-NJC Female N connector; 10D coax . Δm	9.95	6.95

BASE STATION ANTENNAS

CA-2x4FX 2m/440 4.5/7.2db 5' 11" base Dwf	$121.25	89.95
CA-2x4MAXN 2m/440 8.5/11.9db 17' 8" N Dm	219.95	159.95
CA-2x4WX 2m/440 6.5/9db 10' 2" ant ....Dwf	174.95	139.95
CA-2x4Z 2m/440 8.2/11.5db 15' 11" N Dmwfv	209.95	159.95
CA-62DB 52-54MHz 6.5db 21.75' base ant ...	139.95	119.95
CA-350DB 10/6m 2.15/6.5db 22' 7" ant	289.95	259.95
CA-712EF 440 9db 10' 5" base antenna	134.95	119.95
CA-1218G 1.2GHz 12db 7.75' HD N ....Dmwfv	145.00	99.95

COMET - continued

	Reg	Sale
CA-1243E 440/1.2 GHz 6/8.4db 3' 4" type N ..	94.95	84.95
CA-1243Z 440/1.2 GHz 9.4/12.8db 7' type N .	161.95	149.95
CA-2422S 2.4GHz 15.3db 4' 8" type N base ..	180.85	159.95
CA-ABC21 2m 3.4db 4' 7" base antenna	59.95	
CA-ABC23 2m 7.8 db 13' 4" base antenna	134.95	119.95
CA-F22GF 136-175 6db 8' 10" tunable .....T	141.95	124.95
CA-F72GF 440-470 6db 3' 6" tunable ant	119.25	106.95
CA-Super22 220 6.6db 8' 2" base ant	135.00	119.95
CFC-771 900MHz 4.5' 7.14db type N ant	97.40	89.95
CMR-241 2m/440 4.5/7.2db 6.5' base ant	169.95	149.95
CMR-1215 1.2GHz 11db 6.6' type N ant .Dmv	229.95	169.95
CX-333 2m/220/440 6.5/7.8/9db 10.25' ant .	214.95	194.95
CX-902 2m/440/1.2 6.5/9/9db 10' N ...Dmwv	189.95	139.95
CX-903 2m/440/1.2 6.5/9/13.5db 9' 4" N ..Dm	229.95	169.95
CX-908 2m/430/905MHz 5' 4.5/7.2/10db N Dm	162.55	129.95
CYA-1216E 1.2GHz 16el 16.6db 4' 5" N beam	139.95	129.95
FP-19 900 MHz 16db 7' 4" type N antenna ...	119.95	109.95
GP-3 2m/440 4.5/7.2db 5' 11" base antenna	121.25	109.95
GP-6 2m/440 6.5/9db 10' 2" base antenna ..	174.95	154.95
GP-9 2m/440 8.5/11.9db 17' 8" antenna	219.95	189.95
GP-9N 2m/440 8.5/11.9db 17' 8" N antenna .	219.95	189.95
GP-15 6/2m/440 3/6.2/8.6db 8' base	159.95	139.95
GP-21/CA-1221S 1.2GHz 14.8db 8.5' N ant ..	164.95	149.95
GP-93 2m/440/1.2 4.5/7.2/10db 5' 7" type N	149.95	139.95
GP-98 2m/440/1.2 6.5/9/13.5db 9' 8" N ant..	229.95	209.95
GPX-2010 2m/440 9.5/13.2db 23' 4" antenna	395.95	364.95
NCG-1422B 2m/220 2.15/3.4db 3' 8" .Dmwfv	119.50	79.95
PYA-913 900MHz 13el 15.8db 4' 8" type N beam .	144.95	129.95

DUPLEXERS AND TRIPLEXERS

CF-142 1.3-150/200-480 600/400w UHF/leads	$ 64.95	59.95
CF-360A 1.3-30/50-470 600w UHF w/leads ..	69.95	64.95
CF-413A 440/1.2 500/200w N w/leads	68.10	64.95
CF-413B 440/1.2 500/200w N/UHF/N leads ..	68.10	64.95
CF-416A 2m/440 800/500w UHF w/leads	58.70	52.95
CF-416C 2m/440 800/500w N/UHF/N leads ..	58.70	52.95
CF-416W 1.3-250/400-1400 400/200w N/leads	84.95	76.95
CF-530 1.3-90/125-470 600w UHF w/leads ..	69.95	64.95
CF-4130A 440/1.2 500/200w N, no leads	69.00	64.95
CF-4160I 2m/440 800/500w UHF/UHF/N, no leads ..	52.25	49.95
CF-4160J 2m/440 800/500w SO-239, no leads	52.25	49.95
CF-4160K 2m/440 800/500w all UHF, no leads .	52.25	49.95
CFX-324A 2m/220/440 600w UHF w/leads	99.95	89.95
CFX-324B 2m/220/440 600w UHF, no leads ..	95.00	84.95
CFX-431A 2m/440/900-1.2 N/UHF/N/N, leads	81.95	72.95
CFX-431B 2m/440/900-1.2 N/UHF/UHF/N, leads .	81.95	72.95
CFX-514 HF/2m/440 800/800/500w UHF w/leads .	79.95	74.95
CFX-514J HF/2m/440 800/800/500w UHF, no leads ..	75.95	69.95
CFX-4310B 2m/440/900-1.2 N/UHF/N/N, no leads .	82.95	74.95
CFX-4310C 2m/440/1.2; Kenwood TM-741A/941A ..	82.95	74.95
NCG-1422D 2m/220 100w UHF w/leads Dmwf	62.70	49.95

HT AND HAND-HELD SCANNER ANTENNAS

CH-32 2m/440 1.75" BNC antenna	$ 33.95	
CH-72S 2m/440 0/3.2db 15" BNC antenna ...	32.95	
CH-720C 2m/440 semi-rigid 0/3.8db 18" BNC	37.95	
CH-1200WS 1.2 GHz 5.6db 13" BNC HT ant ..	32.95	
CH-701X 2m/440/900 2/3.4/5.5db 19" BNC ..	48.95	
CH-722SA 2m/440 3/5.5db BNC whip ant	44.95	
CY-1205 1.2 GHz 11db 7" BNC HT beam	41.45	
SH-55 2m/440 1.5/3.2db 15" BNC ant	32.95	
SH-95 2m/440/1.2 1.5/2.15/5.5db BNC ant ..	49.95	

SWR/POWER METERS & MINIMETERS

CD-160H 1.6-60 MHz 2kw SWR/power ..... Dm	$169.95	139.95
CD-270 140-525 MHz 200w SWR/power ...Dm	159.95	129.95
CM-200 140-150 MHz minimeter .....Dmwv	51.95	39.95
CM-300 220-240 MHz minimeter .....Dmfv	51.95	39.95
CM-400 430-450 MHz minimeter .....Dmwv	51.95	39.95
CM-400N 430-450 MHz N minimeter ..Dmwfv	55.50	39.95
CM-420 140-150/430-450 minimeter .....Dfv	75.95	59.95
CM-420N 140-150/430-450 N minimtr Dmwfv	78.95	59.95
CM-720 140-150/430-450 MHz minimeter	75.95	69.95
CM-720N 140-150/430-450 type N minimeter	79.95	74.95
CM-900 900-920 MHz type N minimeter	89.95	79.95
CM-1200 1240-1300 MHz type N minimeter ..	89.95	79.95
CMX-1 1.8-60 MHz 2000w SWR/pwr/rem head	209.95	189.95
CMX-2 1.8-200 MHz 200w SWR/pwr/rem head	199.95	179.95
CMX-3 140-525 MHz 200w SWR/pwr/rem head	189.95	169.95
EKS-3 10' remote head extension cable	23.95	
NCG-2000 140-525 MHz 200w SWR/power	99.95	89.95

COMET - continued

	Reg	Sale

ACCESSORIES

CS-290P 1500MHz 150w N lightning protect	$ 39.95	
CS-400P 500MHz 250w lightning protect	34.95	
CSP-30 Mini speaker w/magnet mt	29.25	
CSP-80 Mini spkr w/mag mt, noise filt, mute	37.95	
CSW-20 0-950MHz coax switch	57.60	49.95
CSW-20N 0-1300MHz type N coax switch	99.95	89.95
HM-P2F Mini spkr/mic; Ali/Ico/Sta/Yae	32.95	
HM-P2K Mini spkr/mic for Kenwood	32.95	
Power Pocket 12v 2AH lead acid belt batt/cgr	74.95	69.95

COMFOCUS (CMF)

Softwave SW/VHF Rcvr hard/software; IBM m	1735.00	1469

Communications Specialists (COM)

SS-32P Programmable CTCSS encoder	$ 28.95	
SS-32SMP Hybrid micro-sized encoder	27.95	
TE-64 64-tone CTCSS/burst switch encoder ..	79.95	
TS-32P 32-tone CTCSS prog encoder/decoder .	57.95	
DTD-1 DTMF decoder	59.95	

CONNECTORS

AMPHENOL COAX CONNECTORS (AMP)

83-1SP-1050 Male coax plug (PL-259)	$ 2.23	
83-1SP Silver plated coax plug (PL-259)	3.46	
Van Gorden (VAN) **silver plated** teflon PL-259	2.99	
83-185 Reducer for RG-58 (UG-175)	.74	
83-168 Reducer; RG-59/RG-8X (UG-176) ...	.80	
83-1AP Right angle adaptor (UG-646)	6.85	
83-1J Double female adaptor (PL-258)	3.95	
83-1R Female chassis mt socket (SO-239) ...	2.41	
83-1H Hood for in-line use (UG-106)	3.97	
83-1T T-connector adaptor (M-358)	9.77	
83-877 Double male adaptor	9.95	
83-878 Single hole ⅜" chassis socket Δmwfv	3.10	1.95
31-002 BNC male connector for RG-58	4.04	
31-012 BNC male connector; RG-59/RG-8X ..	4.53	
31-221 BNC female chassis socket ...Δmwfv	2.39	1.95
82-24 Type N female chassis mt socket	5.42	
82-61 Type N male connector for RG-8	8.79	
82-64 Type N right angle adaptor .....Δmwfv	23.91	8.95
82-202-1006 Type N male; Belden 8214/9913 .	8.41	
82-209 Type N female in-line for RG-8	7.40	
34025 Type N male connector for RG-58	7.83	

AMPHENOL COAX ADAPTORS (AMP)

2900 SO-239 to BNC male adaptor	$ 11.15	
4400 SO-239 to type N male adaptor	15.41	
34125 Type N female - PL-259 adapt	24.98	19.95
45250 Type N double male adaptor ....Δmwfv	16.19	6.95
31-28 BNC female to PL-259 adaptor	10.37	
83-10 SO-239 to Motorola/phono plug	10.84	

AIM COAX CONNECTORS & ADAPTORS (AIM)

25-7302 0-900MHz teflon insulator PL-259 ..	$ 4.50	
25-7351 Chassis mt SO-239 double female ..	5.60	
25-7365 BNC female to SO-239	4.90	
25-7420 BNC male to SO-239	3.80	
26-8010 Type N double female	5.70	
26-8011 Type N chassis mount	2.70	
26-8015 N male to SO-239	7.90	
26-8016 BNC female to N male	7.90	
26-8017 BNC male to N female	7.90	
27-8110 BNC female to RCA male	5.50	
27-8120 BNC female to PL-259	3.70	
27-8130 BNC double male	4.80	
27-8140 BNC T; 2 female, 1 male	4.40	
27-8142 BNC T, 3 male	8.90	

On major products ask your salesperson about...

- **Late Breaking "Hot Deals"**
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Info also available on the **AES® BBS**

1-414-358-3472

CONNECTORS - continued

Item	Description	Reg	Sale
27-8450	BNC chassis mt, 4 screw holes	3.50	
27-8460	⅜" hole BNC chassis mt	1.90	
27-8470	Dual BNC chassis mount	5.00	
29-3855	BNC female to SMA male	11.50	
29-4140	SO-239 to mini PL-259	5.50	

SWITCHCRAFT MICROPHONE CONNECTORS (SWI)

Item	Description	Reg	Sale
480	.206" 3-cond mic plug (PJ-068/Collins)	$ 12.50	
S-260	.206" 3-cond mic plug (Drake)	6.65	

Switchcraft 1/4 " Plugs w/Solder Terminals (SWI)

Item	Description	Reg	Sale
267	3-conductor, plastic handle	$ 4.45	
237	As above, but right angle plug	5.15	
260	3-conductor w/screw terminals	5.05	
297	3-conductor, metal handle	5.35	
250	2-conductor, plastic handle	3.00	
220	As abv, w/screw terminals, rt angle plug	4.40	
280	2-conductor, metal handle	4.45	

SWITCHCRAFT PHONO-TYPE CONNECTORS (SWI)

Item	Description	Reg	Sale
3501MC	Phono plug with cable clamps	$ .90	
3502	Shielded phono plug	1.75	
3507	RF-type phono plug	2.55	

VANCO MICROPHONE CONNECTORS (VCO)

Item	Description	Reg	Sale
CBC-3	3-pin female mic plug	$ 3.27	
CBC-4	4-pin female mic plug	4.04	
CBC-4P	Panel mt 4-pin male	2.21	
CBC-5	5-pin female mic plug	3.87	
CBC-5P	Panel mt 5-pin male	2.21	
CBC-6	6-pin female mic plug	4.06	
CBC-8	8-pin female mic plug	5.89	
CBC-8P	Panel mt 8-pin male	5.57	

KENWOOD DIN PLUGS (KEN)

Item	Description	Reg	Sale
7-pin DIN	plug	$ 3.92	
8-pin DIN	plug	4.51	
13-pin DIN	plug	6.76	

VANCO MINI PHONE PLUGS (VCO)

Item	Description	Reg	Sale
P-25	2.5mm sub-miniature phone plug	$ .99	
P-35	3.5mm miniature phone plug	.99	
P-12V	Cig lighter plug w/leads	2.91	

Connect Systems (CSY)

Item	Description	Reg	Sale
CS-700	Simplex interconnect	$329.00	299.95
CS-800	Full duplex patch & repeater controller	349.00	319.95
CS-900	Simplex interconnect	379.00	349.95
Private Patch V	Multi-mode interconnect	533.25	489.95
9801	Elec voice delay (EVD); Private Pch V	139.00	
8200D	Full duplex patch/repeater controller	550.00	529.95
CS-1688	Deluxe DTMF decoder/controller	149.00	

COYNE (COY)

HAM RADIO TEST GENERATOR FOR MACINTOSH

Item	Description	Reg	Sale
MacHam	no code **Tech**nician, includes Novice 2A	$ 39.95	
MacHam General		34.95	
MacHam Advanced		34.95	
MacHam Extra		34.95	
MacHam Radio	Morse Code training software	39.95	

CROSS DEVICE (CRS)

Item	Description	Reg	Sale
STUF	Coax connector waterproofing filler	$ 4.50	

CROWN METAL (CRO)

SOLID BASE COPPERWELD ANTENNA WIRE

Item	Description	Reg	Sale
AN-122	100 feet No. 12	$ 24.95	
AN-123	150 feet No. 12	29.95	
AN-124	250 feet No. 12	49.95	
AN-126	500 feet No. 12	84.95	
AN-128	1000 feet No. 12	154.95	139.95
AN-142	100 feet No. 14	19.95	
AN-143	150 feet No. 14	24.95	
AN-144	250 feet No. 14	29.95	
AN-146	500 feet No. 14	54.95	
AN-148	1000 feet No. 14	104.95	99.95
AN-181	250 feet No. 18	14.95	
AN-182	500 feet No. 18	24.95	

CUSHCRAFT (CUS)

VHF/UHF FM BEAMS (Vertical polarization)

Item	Description	Reg	Sale
A148-3S	2m, 3 el wideband beam	$ 46.00	43.95
A148-10S	2m, 10 el wideband beam	82.00	72.95
A148-20S	2 A148-10S vert stacked	224.00	184.95

CUSHCRAFT - continued

Item	Description	Reg	Sale
A449-6S	440 MHz, 6 el, 3' boom, 10 db	57.00	53.95
A449-11S	440 MHz, 11 el, 4.5' boom, 13 db	83.00	74.95
A270-10S	2m/440, 5/5 el, 6.17' boom, 10 db	99.00	79.95

FM VERTICAL STACKING KITS* (Adds 3 db)

Item	Description	Reg	Sale
A14-VPK	Stacking kit for 2 A147-4 .....Dmwfv	$ 61.00	34.95
A14-SK	Harness only for 2 A148-3S	46.00	
A147-VPK	Stacking kit for 2 A147-11 ....Dv	101.00	69.95
A148-VPKS	Stacking kit for 2 A148-3S/10S	103.00	92.95
A147-SK	Harness only for 2 A147-11 ....Dmfv	45.00	24.95
A148-SK	Harness only for 2 A148-10S	46.00	
A449-VPK	Stacking kit; 2 A449-6/11 ....Dv	61.00	39.95
A449-VPKS	Stacking kit; 2 A449-6S/11S	62.00	
A449-SK	Harness only for 2 A449-6S/11S	46.00	

*Prices are for stacking kits only

FM RINGOS - 1/2 Wave Verticals - 3.75 db

Item	Description	Reg	Sale
AR-10	10m FM Ringo, 1000w	$ 68.00	59.95
AR-6	6m FM, 1000w	68.00	59.95
AR-2	2m FM, 1000w	48.00	39.95
AR-220	220 MHz FM, 500w	47.00	39.95
AR-450	440 MHz FM, 500w	47.00	39.95
AR-270	2m/440 MHz FM, 250w, 3.7/5.5db	86.00	72.95
AR-270B	2m/440 MHz FM base ant	125.00	99.95

RINGO RANGERS - FM Verticals - 6 db

Item	Description	Reg	Sale
ARX-2	2m FM Ringo Ranger	$ 58.00	49.95
ARX-2B	2m FM Ringo Ranger II, 1000w	70.00	59.95
ARX-220B	220 FM Ringo Ranger II, 500w	70.00	59.95
ARX-450B	440 FM Ringo Ranger II, 500w	70.00	59.95
ARX-450BN	440 FM Ringo Ranger II w/type N	85.00	72.95

HIGH PERFORMANCE 2m/440 VERTICALS

Item	Description	Reg	Sale
ARX-270N	2m/440 9/12 db fg type N ant	$268.00	209.95
ARX-270U	2m/440 9/12 db fg SO-239 ant	268.00	209.95

FM 4-POLES (less vertical support mast)

Item	Description	Reg	Sale
AFM-4DA	2m FM, 23' high, 6/9 db	$141.00	112.95
AFM-24DA	220 MHz FM, 15' high, 6/9 db	125.00	99.95
AFM-44DA	440 MHz FM, 8' high, 6/9 db	109.00	89.95

TWIST, OSCAR BEAMS (Horiz/Vert Polarization)

Item	Description	Reg	Sale
A144-10T	2m, 10 el, 5' boom, 10 db	$103.00	84.95
A144-20T	2m, 20 el, 10' boom, 12 db	148.00	119.95
A147-20T	2m FM/SSB, 10' boom, 12 db Dmfv	120.00	89.95
A148-20T	2m 20el 10.8'bm 11.1db twist	120.00	99.95
22XB	2m 22el 19.3' bm 14db circ beam/relay	290.00	209.95
416TB	432 twist Boomer, 16el, 6'boom, 12db	121.00	99.95
738XB	432 38el 14.3'bm 15.5db circ w/relay	268.00	199.95
PS-4	Remote polarity switch, needs 12vdc	150.00	119.95
A14T-MB	Oscar mtg boom & bracket	49.00	
AOP-1	Oscar pack; A144-20T/416TB/A14T-MB	300.00	239.95

BOOMER ANTENNAS

Item	Description	Reg	Sale
617-6B	6m Boomer, 6 el, 34' boom, 14 db	$407.00	319.95
124WB	2m Boomer, 4 el, 4' boom, 10.2 db	70.00	63.95
13B2	2m Boomer, 13 el, 15' boom, 15.8 db	138.00	112.95
17B2	2m Boomer, 17 el, 31' boom, 18 db	237.00	189.95
26B2	2 13B2s vertically stacked	390.00	309.95
220B	220 Boomer, 17 el, 19' boom, 17 db	185.00	149.95
224WB	220 Boomer, 4 el, 3' boom, 10.2db	67.00	59.95
225WB	220 wideband Boom, 15el, 10'bm, 15.5db	143.00	114.95
416TB	432 twist Boomer, 16 el, 6' boom, 12db	121.00	99.95
PS-4	Remote polarity switch, needs 12vdc	150.00	119.95
424B	432 Boomer, 24 el, 17.5' boom, 18 db	158.00	126.95

BOOMER STACKING KITS*

Item	Description	Reg	Sale
617-SK	Harness, pwr divider for 2 617-6Bs	$152.00	129.95
324-QK	Quad stacking kit for 4 32-19s ..Dmv	575.00	149.95
22-SK	Harness, power divider; 2 13B2s	93.00	82.95
22N-SK	Harness, pwr divider; 2 17B2s	152.00	129.95
26B2-VPK	Vertical polar kit; 2 13B2s	200.00	159.95
230-VPK	Vert polarity kit; 2 215WBs ......Dwfv	185.00	49.95
224-QK	Quad stack kit; 4 215WBs/214Bs .Dw	390.00	129.95
42-SK	Harness, pwr divider; 2 4218XLs ...Dm	90.00	39.95
220-SK	Harness, power divider for 2 220Bs	93.00	82.95
220-QK	Quad stacking kit for 4 220Bs ....Df	390.00	129.95
PD-2	Power divider for 2 13B2s	46.00	
PD-2N	Power divider for 2 17B2s	87.00	76.95
PD-4	Power divider for 4 13B2s	58.00	
PD-4N	Power divider for 4 17B2s	108.00	96.95
PD-222	Power divider for 2 220 Boomers	46.00	
PD-224	Power divider for 4 220 Boomers	58.00	

*Prices are for stacking kits only

CUSHCRAFT - continued

VHF/UHF BEAMS (Horizontal polarization)

Item	Description	Reg	Sale
A50-3S	6m, 3 el, 6' boom, 8 db, stainless hdwre	$105.00	89.95
A50-5S	6m, 5 el, 12' boom, 10 db, stainless hdwre	173.00	139.95
A50-6S	6m, 6 el, 20' boom, 11db, stainless hdwre	282.00	224.95
A144-7S	2m, 7 el, 8' boom, 10 db	57.00	53.95
A148-10S	2m, 10 el wideband beam	82.00	72.95
A430-11S	430 MHz, 11 el, 4' boom, 13 db	83.00	72.95

HORIZONTAL STACKING KITS* (Adds 3 db)

Item	Description	Reg	Sale
A535-SK	For 2 A50-3S/5S	$ 46.00	
A561-SK	For 2 A50-6S	60.00	
A17-SK	For 2 A144-7S, 79" spacing	46.00	
A11-SK	For 2 A144-11, 79" spacing .....Dmwf	45.00	24.95
A148-SK	Harness only for 2 A148-10S	46.00	
A41-SK	For 2 A430-11S, 26" spacing	46.00	

*Prices are for stacking kits only

CUSHCRAFT/SIGNALS MOBILE ANTENNAS

Item	Description	Reg	Sale
CS-28M	10m magnet mt antenna	$ 64.00	59.95
CS-50	6m ¾" hole mt 3 db antenna	55.00	49.95
CS-50M	6m magnet mt 3 db antenna	64.00	59.95
CS-50T	6m trunk lip mt 3 db antenna	64.00	59.95
CS-1147M	2m ¼ wave magnet mt antenna	42.00	39.95
CS-147	2m ¾" hole mt 3 db antenna	55.00	49.95
CS-147M	2m magnet mt 3 db antenna	64.00	59.95
CS-147T	2m trunk lip mt 3 db antenna	64.00	59.95
CS-147A	2m coil & whip only	43.00	39.95
CS-220	220 ¾" hole mt 3 db antenna	55.00	49.95
CS-220M	220 magnet mt 3 db antenna	64.00	59.95
CS-220T	220 trunk lip mt 3 db antenna	64.00	59.95
CS-1450M	440 ¼ wave magnet mt antenna	42.00	39.95
CS-450	440 ¾" hole mt 5 db antenna	55.00	49.95
CS-450M	440 magnet mt 5 db antenna	64.00	59.95
CS-450T	440 trunk lip mt 5 db antenna	64.00	59.95
CS-450A	440 coil & whip only	43.00	39.95
CS-270M	2m/440 3.7/6 db magnet mt ant	88.00	72.95
CS-270A	2m/440 coil & whip only	43.00	39.95

MOUNTS ONLY FOR ABOVE MOBILE ANTENNAS

Item	Description	Reg	Sale
CS-MG	Magnetic mount	$ 29.00	
CS-TL	Trunk lip mount	29.00	

PORTABLE ANTENNAS

Item	Description	Reg	Sale
BN-220RC	220 2" BNC duck; Icom/Yae ....Dm	$ 19.00	8.95
BN-440RC	440 2" BNC duck; Icom/Yae ....Dm	19.00	8.95

PORTABLE ANTENNAS FOR KENWOOD

Item	Description	Reg	Sale
TK-141S	2m 3" TK duck for Kenwood ....Dm	$ 17.00	8.95
TK-220B	220 6" TK duck for Kenwood ......Dm	17.00	6.95
TK-440B	440 6" TK duck for Kenwood ......Dm	17.00	6.95

SKYWALKER HF BEAMS

Item	Description	Reg	Sale
40-2CD	40m, 2 el, 23' boom, 5.5 db	$596.00	449.95
20-4CD	20m, 4 el, 32' boom, 10 db	596.00	449.95
20-3CD	20m, 3 el, 20' boom, 8 db	417.00	314.95
15-4CD	15m, 4 el, 20' boom, 10 db	337.00	254.95
15-3CD	15m, 3 el, 14' boom, 8 db	290.00	219.95
10-4CD	10m, 4 el, 16' boom, 10 db	285.00	214.95
10-3CD	10m, 3 el, 10' boom, 8 db	221.00	169.95
TEN-3	10m, 3 el, 8' boom, 8 db	143.00	114.95

MULTIBAND VERTICAL ANTENNAS

Item	Description	Reg	Sale
AV-5	80/40/20/15/10m 25' vertical	$210.00	159.95
AV-3	20/15/10m 14' vertical	117.00	94.95
AP-8A	80-10m 8-band ruggedized vertical	278.00	209.95
APR-18A	Radial kit	65.00	62.95
R-5	20/17/15/12/10m half wave vert	382.00	289.95
R-7	40/30/20/17/15/12/10m vertical	510.00	379.95

ROTATABLE DIPOLES

Item	Description	Reg	Sale
D-3	20/15/10m World Ranger dipole	$232.00	184.95
D-3W	30/17/12m rotatable dipole	237.00	189.95
D-4	40/20/15/10m World Ranger dipole	315.00	249.95
D-40	40m World Ranger dipole	282.00	219.95

MULTIBAND BEAM ANTENNAS

Item	Description	Reg	Sale
A-3S	20/15/10m, 3el, 14'bm, 8db, stainless hdwre	$483.00	339.95

NEW! AES® Credit Card
details... p.p. 156-158

MasterCard VISA DISCOVER NOVUS AMERICAN EXPRESS Cards

CUSHCRAFT - continued

	Reg	Sale
A-743 40m or 10 MHz add-on kit; A-3/A-3S	153.00	129.95
A-4S 20/15/10m, 4el, 18'bm, 9db, stainless hdwre	578.00	409.95
A-744 40m or 10 MHz add-on kit; A-4/A-4S	153.00	129.95
A-3WS 17 & 12m, 3 el, 14' boom, 8 db	378.00	284.95
A-103 30m add-on kit for A-3WS	153.00	129.95
ASL-2010 13.5-32MHz 8el 18' bm 6.4db LP	800.00	599.95
AFB-2 160-10m 9-band balun	60.00	49.95

LIGHTNING ARRESTORS

LAC-1 SO-239/PL-259 coax arrestor	$ 12.00	
LAC-2 SO-239/SO-239 coax arrestor	12.00	
LAC-4 200w SO-239 gas tube arrestor	41.00	37.95
LAC-4H 2kw SO-239 gas tube arrestor	45.00	39.95
LAC-4N 200w type N gas tube arrestor	53.00	47.95
LAC-4NH 2kw type N gas tube arrestor	55.00	49.95
LC-2 Extra 200w cartridge for LAC-4/4N	17.00	
LC-2KW Extra 2kw cartridge for LAC-4H/4NH	19.00	
5VB Vinyl connector boots .....pack of 5	12.00	

DC SALES (DCS)

Tenna Hitch Antenna mount for trailer hitch	$ 32.95	

DRSI (DRS)

PCPA-1 Packet adapter plug-in card for IBM	$149.95	
HF Modem External HF modem for PCPA-1 or 3	89.95	
PCPA-2 Dual modem VHF packet adapter; IBM	179.95	
PCPA-3 Dual serial packet adapt; IBM Dmwfv	149.95	79.95
HF Modem (PCPA-3 uses 2 for BBS)	89.95	
DCD-3105 Open squelch DCD adapter	31.95	
M-2400 2400 baud VHF modem; PCPA1/3 .Dmv	149.95	99.95
DPK-2 1200 baud packet radio TNC	114.95	
DPK-9600 9600 baud packet radio TNC	249.95	
Radio cable	9.95	
RS-232 cable	12.95	

DAIWA (DAI)

CS-201 2-position 600 MHz coax switch	$ 25.95	
CS-401 4-position 800 MHz coax switch	139.95	119.95
CN-101 1.8-150MHz SWR/power meter/light	102.95	94.95
CN-103M 140-525MHz SWR/power meter	102.95	94.95
CN-410M 3.5-150MHz 15/150w mob meter	104.95	94.95
CN-460M 140-450MHz 15/150w mob meter	104.95	94.95
CN-465M 140-450MHz 15/75w mobile meter	104.95	94.95
DP-820 140-525MHz dig SWR/power meter	295.95	269.95
DP-830 1.8-150/140-525 digital SWR/power	385.95	349.95
NS-660PA 1.8-150 30/300/3kw PEP SWR/pwr	229.95	199.95

DAVIS (DAV)

7400 Perception II indoor WX unit	$150.00	129.95
7415 Wizard II-S weather station	150.00	129.95
7425 Wizard III weather station	195.00	169.95
7440 Monitor II weather station	395.00	349.95
7852 Rain Collector II, 0.01"	75.00	69.95
7859 External temp/humd Sensor II; 7440	125.00	109.95
7862 Weatherlink IBM interface/software	165.00	139.95
7866 Weatherlink Mac interface/software	165.00	139.95
7867 Weatherlink IBM conversion kit	40.00	
7868 Weatherlink Mac conversion kit	40.00	
7870 Modem adapter for 7862/7866	6.00	
7873 Cig lighter power cord	9.00	

DAVIS - continued

	Reg	Sale
7876 4-conductor 40' extension cable	18.00	
7878 6-conductor 40' extension cable	22.00	
7880 8-conductor 25' junction box cable	15.00	
7881 8-conductor 50' junction box cable	25.00	
7882 8-conductor 100' junction box cable	45.00	
7890 Mast mount anemometer	16.00	
7520 Stand alone 0.01" rain gauge/elec ctr	95.00	89.95

DIAMOND (DIA)

METERS

SX-100 1.6-60 MHz 30/300/3kw PEP meter	$159.95	149.95
SX-200 1.8-200 MHz 5/20/200w PEP meter	129.95	119.95
SX-400 140-525 MHz 5/20/200w PEP meter	149.95	139.95
SX-600 Dual band 1.8-160/140-525 200w PEP meter	249.95	229.95
SX-1000 1.8-160/430-1300MHz 200w PEP meter	279.95	259.95
SX-9000 1.8-160/430-1300MHz auto meter	299.95	279.95

MOBILE ANTENNAS

CR-214S 2m/220 2.1/3.4db 37" mobile ant	$ 59.95	54.95
CR-224A 2m/220 5/6db 69" mobile antenna	104.95	94.95
CR-320A 2m/220/440 2.15/3.8/5.5db 36"	93.95	88.95
D-505 PO-mt .5-1500MHz active rcv ant Dmwv	139.95	129.95
NR-22L 2m 6.5db 97" mobile antenna .....Dm	89.95	69.95
NR-72BNMO Black 2m/440 2.15db 14" NMO	44.95	42.95
NR-73BNMO Blk 2m/440 2.15/5.5db 34" NMO	59.95	54.95
NR-124 1.2GHz 8.4db 25" type N mobile ant	63.95	59.95
NR-140A 220 4db 37" mobile antenna	57.95	52.95
NR-770HA 2m/440 3/5.5db 40" mobile ant	59.95	54.95
NR-770HNMO 2m/440 3/5.5db 40" NMO mobile	61.95	56.95
NR-770RA 2m/440 3/5.5db 39" mobile ant	59.95	54.95
NR-790A 2m/440 4.5/7.2db 57" mobile ant	89.95	84.95
NR-2000NA 2m/440/1.2 3/6/9.7db 39" N mob	87.95	82.95
SG-2000A 2m 5.2db 62" mobile antenna	85.95	79.95
SG-7200NMO 2m/440 3.2/5.7db 38" NMO ant	84.95	79.95
SG-7500A 2m/440 3.5/6db 41" mobile ant	82.95	78.95
SG-7900A 2m/440 5/7.6db 62" mobile ant	118.95	109.95
RH-77CA 2m/440 15" BNC rubber gain ant	32.95	29.95
RH-951 2m/440/1.2GHz 15" BNC rubber ant	54.95	49.95

MOBILE MOUNTS

DP-SPM/5D Hvy duty mag mt, cable; 45" max	$ 43.95	
DP-SPM/58U Mag mt w/RG-58U; 45" max	41.95	
DPK-4NM-M Hvy mag mt, Yaesu N, 45" max	49.95	
DPK-5NM Hvy duty mag mt, cbl, type N, 45" max	56.95	
FE-5M Two-stage coax & SO-239 mtg group	38.95	
GLP-5 UHF base mtg group hrdwr; mini coax	9.95	
GLP-5N UHF mtg grp hrdwr; mini coax, Yae N	10.95	
GLP-58 UHF base mounting group hardware	9.95	
K-200 Folding hatch/tnk mt; NR/SG ants	41.95	
K-200KM Folding hatch/tnk mt/coax; NR/SG	69.95	
K-300 Folding gutter mt; NR/SG antennas	37.95	
K-300KM Folding gutter mt w/coax; NR/SG	64.95	
K-300M Gutter mt w/cable; NR/SG ants	79.95	
K-400 Hatch/trunk mt; NR/SG antennas	39.95	
K-400K-3/8M Trunk mount w/cable; ⅜-24	74.95	
K-400M Hatch/trunk mt w/cable; NR/SG ants	78.95	
K-400NMO Dlx hatch/trunk mt w/cable; NMO	64.95	
K-540 Mirror/luggage rack mount	37.95	
K-540KM Mirror/luggage rack mt w/coax	64.95	
K-600M Tilt angle trunk mt w/cable	68.95	
K-600N Tilt angle tnk mt w/type N, cable	74.95	

DIAMOND - continued

	Reg	Sale
K-600P Tilt angle trunk mt w/cable, Yaesu N	72.95	
NMO-UHF Adapter to NMO; not for SG, 45" max	22.95	
Larsen **PO-K** Roof mt, coax; NR/SG ants, 45" max	23.00	
Larsen **PO-TLM** Tnk mt, coax; NR/SG ants	26.35	

BASE STATION ANTENNAS

CP-4A 40/20/15/10m 11' 200w PEP vert ..Dmw	$259.95	199.95
CP-5 80/40/20/15/10m 14.7' 200w PEP vert Dw	309.95	239.95
CP-6 80/40/20/15/10/6m 15' 200w PEP vert Dmw	324.95	249.95
D-130J 25-1300 MHz 200w discone ant	96.95	89.95
DP-GH62 6m 6db 21' base antenna	149.95	139.95
F-22A 2m 6.7db 10.5' base antenna	109.95	99.95
F-22J 143.5-146.5MHz 6.7db 10.5' base ant	109.95	99.95
F-23A 2m 7.8db 15' base antenna	164.95	154.95
F-23C1 148-154MHz 7.8db 15' comm base	175.00	164.95
F-23J 143.5-146.5MHz 7.8db 15' base ant	164.95	154.95
F-142A 220 MHz 5.5db 6' base antenna	129.95	119.95
F-718A 440 11.5db 15' type N base antenna	234.95	214.95
F-718C2 460-472MHz 11.5db 15' N comm	249.00	229.95
F-718J 428-442MHz 11.5db 15' N base ant	234.95	214.95
F-718L 420-430MHz 11.5db ATV N base ant	234.95	214.95
F-1230A 1.2GHz 13.5db 10.5' type N base ant	169.95	159.95
U-200 440/1.2GHz 8.3/11.7db 6' N base ant	134.95	124.95
U-300A 440/1.2GHz 8.6/13.2db 8.3' N base ant	169.95	159.95
U-5000A 2m/440/1.2GHz 4.5/8.3/11.7db 6' N	159.95	149.95
V-2000A 52-54MHz/2m/440 2.1/6.2/8.4db 8.3'	164.95	154.95
X-50A 2m/440 4.5/7.2db 5.6' base antenna	119.95	109.95
X-200A 2m/440 6/8db 8.3' base antenna	159.95	149.95
X-300A 2m/440 6.5/9db 10.2' base ant	174.95	164.95
X-500HNA Hvy duty 2m/440 8.3/11.7db 17.8' N ant	257.95	236.95
X-510MA 2m/440 8.3/11.7db 17.2' base ant	209.95	189.95
X-510NA 2m/440 8.3/11.7db 17.2' type N ant	209.95	189.95
X-510NJ 143.5-146.5/428-442MHz 17.2' N	209.95	189.95
X-700HA 2m/440 9.3/13db 24' base ant	419.95	379.95
X-2200A 2m/220 6/7.8db 11.5' base ant	174.95	164.95
X-3200A 2m/220/440 6/7.8/8db 10' base	229.95	209.95
X-6000A 2m/440/1.2 6.5/9/10db 10.5' N	209.95	189.95

DUPLEXERS

MX-37MB HF-440/1.2 100/50w SO-239 Dmv	$ 79.95	49.95
MX-37N HF-440/1.2 100/50w type N duplexer	63.95	59.95
MX-72D HF-2m/440 400/150/100w duplexer	51.95	
MX-72DN As MX-72D, w/type N on 440	59.95	54.95
MX-72H As MX-72D, w/12" cables	55.95	
MX-72N As MX-72D, type N on 440, 12" cables	55.95	
MX-214 2m/220 150/100w w/12" cables	69.95	64.95
MX-324 2m/220/440 triplexer	109.95	99.95
MX-2000 HF-6m/2m/440 400/400/250w triplexer	97.95	92.95
MX-3000 HF-2m/440/1.2 400/200/100w triplexer	94.95	89.95
MX-3000D As MX-3000, no cables	94.95	89.95
MX-3000DN As MX-3000, type N on 440, 1.2	94.95	89.95
MX-3000N As MX-3000, type N, 12" cables	94.95	89.95

ACCESSORIES

CA-23R DC-1000MHz 200w N lightning protect	$ 39.95	
CA-35R DC-500MHz 400w lightning protect	34.95	
CX-210A 1.5kw DC-1000MHz coax switch	49.95	
CX-210N 1.5kw DC-1500MHz N coax switch	89.95	84.95
DL-30A 15/100w peak 0-500MHz dummy ... Dmf	29.95	24.95
DL-30N 15/100w peak 0-500MHz N dummy	48.80	
HB-400 HT air vent dash mount	18.95	

Toll Free: **1-800-558-0411** • *Fax:* **(414) 358-3337** • *BBS:* **(414) 358-3472**

AMATEUR ELECTRONIC SUPPLY® Inc.

AES® Store Locations	Phone	Toll Free	FAX
Milwaukee, WI 53223; 5710 W. Good Hope Road	(414) 358-0333	1-800-558-0411	(414) 358-3337
Wickliffe, OH 44092; 28940 Euclid Avenue	(216) 585-7388	1-800-321-3594	(216) 585-1024
Orlando, FL 32803; 621 Commonwealth Avenue	(407) 894-3238	1-800-327-1917	(407) 894-7553
Clearwater, FL 34625; 1898 Drew Street	(813) 461-4267		(813) 443-7893
Las Vegas, NV 89106; 1072 N. Rancho Drive	(702) 647-3114	1-800-634-6227	(702) 647-3412

DIAMOND - continued

	Reg	Sale
HB-500 Remote head air vent dash mount	21.95	
SM-505KTS Spkr/mic for Kenwood TR-2500 ..	37.95	
SW-2 2-pos 0-500MHz coax switch .....Dm	28.95	19.95

Diamond Systems (DSY)

IBM LICENSE COURSE; THEORY/REGULATIONS/CODE

DSI-IBM-N Novice Class License software	$ 49.95	39.95
DSI-IBM-T Technician Class License software .	44.95	34.95
DSI-IBM-NC No Code Tech Class License software .	59.95	49.95
DSI-IBM-G General Class License software ...	44.95	34.95
DSI-IBM-A Advanced Class License software	59.95	49.95
DSI-IBM-E Extra Class License software	59.95	49.95

DIGIMAX (DIG)

D-500 512 MHz 8-digit counter - 1 PPM	$149.95	139.95
D-510A 1 GHz 8-digit counter - 1 PPM	179.95	159.95
D-612 1.2 GHz 9-digit counter - .1 PPM	259.95	239.95
D-1200 1.2 GHz 9-dig .1 PPM ctr/audio mult	299.95	269.95
AC-12 9vdc adaptor	8.95	
AM-12 10X/100X audio multiplier	39.95	
AM-500X X10/X100 audio multiplier .....Δm	69.95	29.95
B-12 Dry cell holder, switch for D-612	10.95	
BAC-5 Nicad batt pack for D-500/D-510A	29.95	
BAC-12 Nicad batt pack; D-612/D-1200	34.95	
RF-500X Inline RF sampler, 250w maximum .	39.95	
T-1200 21" BNC telescopic antenna	8.95	

DRAKE (DRA)

R-8 1290 World band shortwave receiver	$999.00
1590 35-55, 108-174 MHz VHF converter ...	209.00
1591 Interface software for computers	59.00
MS-8 1592 Speaker	49.00
7850 R-8 technical manual	39.95
SW-8 Shortwave receiver	599.00

EIMAC TRANSMITTING TUBES (EIM)

3-400Z/8163	$199.00
3-500Z	183.00
3-1000Z/8164	764.00
3CX800A7	412.00
3CX1200A7	665.00
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4CX250B/7203	131.00
4CX1000A/8168	711.00
4X150A/7034	148.00
8873	458.00
8874/3CX400A7	415.00
8875	499.00
8877/3CX1500A7	935.00

Also see TUBES

FORBES GROUP (FOR)

VT-14 2m Ventenna 3' 2.6 db base ant	$ 49.95	44.95
VT-22 220 Ventenna 25" 2.6 db base ant	49.95	44.95
VT-27 2m/440 Ventenna base antenna	74.95	66.95
VT-44 440 Ventenna 14" 2.6 db base ant	49.95	44.95
VT-15S Scanner Ventenna 3' 2.6 db base	49.95	44.95
VT-SWL SWL Ventenna 3' 20db active rcv	129.95	119.95

Gamber-Johnson (GAM)

SS-100 Super slide mount w/ant plug	$ 72.26	49.95
SS-101 Extra base for SS-100	29.75	

GAP Verticals (GAP)

DX-VIII 80/40/20/15/12/10/6/2m, 31.5'	$259.00
(SYN) **100'** ½" black double braided rope	6.95
DX-VI 40/20/17/15/12/10m 21.5', rigid	269.00
DX-IV 160/80/40/20m 45'; needs 350' guy	399.00
(SYN) **350'** ⅜" black double braided rope	39.95

We do NOT carry GAP antennas at Wickliffe, Ohio.

GLEN MARTIN (GME)

RT-832 8' roof-top tower, 8 sq ft 85 mph	$189.95
RT-936 9' roof-top tower, 28 sq ft 85 mph	328.75
RT-1832 17.5' roof-top tower, 12 sq ft 85 mph	467.50

All GLEN MARTIN towers are drop-shipped (shipped direct to you from the factory). We prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is via UPS at the standard AES shipping rate. Please allow sufficient time for delivery.

GOLD LINE (GOL)

1043 Signal Hunter 10m direction finding ant ..	$ 55.00	49.95

GRUNDIG (GRU)

Cosmopolit Port AM/FM/SW/LW Rcvr .....Dmfv	$249.95	219.95
Satellit 700 AC/DC/batt AM/FM/SW/LW Rcvr .	499.95	399.95
Traveller II Port AM/FM/SW/LW Rcvr/clock	109.95	99.95
Yacht Boy 206 Portable AM/FM/SW/LW Rcvr ..	139.95	129.95
Yacht Boy 220 Port AM/FM/SW/LW Rcvr ....Dmv	129.95	89.95
Yacht Boy 230 Port AM/FM/SW/LW Rcvr .... Dm	199.95	129.95
Yacht Boy 235 Portable AM/FM/SW/LW Rcvr ..	159.95	139.95
Yacht Boy 400 Portable AM/FM/SW/LW Rcvr ..	279.95	249.95

HEIL (HEI)

PRO-SET-4 Deluxe boom mic/headset/HC-4 ..	$122.00	
PRO-SET-5 Deluxe boom mic/headset/HC-5 ..	122.00	
AD-1-I Adapter cord for Icom	13.00	
AD-1-K Adapter cord for Kenwood	13.00	
AD-1-Y Adapter cord for Yaesu	13.00	
BM-5-4 Boom mic/single headset (HC-4)	64.90	
BM-5-5 Boom mic/single headset (HC-5)	64.90	
BM-5-4-I Bm mic/single headset; Icom (HC-4)	69.90	
BM-5-4-K Bm mic/single headset; Kenwood (HC-4) .	69.90	
BM-5-4-Y Bm mic/single headset; Yaesu (HC-4) .	69.90	
BM-5-5-I Bm mic/single headset; Icom (HC-5) .	69.90	
BM-5-5-K Bm mic/single headset; Kenwood (HC-5) .	69.90	
BM-5-5-Y Bm mic/single headset; Yaesu (HC-5) .	69.90	
BM-10-4 Boom mic/headset (HC-4)	71.90	
BM-10-5 Boom mic/headset (HC-5)	71.90	
BM-10-4-I Boom mic/headset; Icom (HC-4)	85.90	
BM-10-4-K Boom mic/headset; Kenwood (HC-4)	85.90	
BM-10-4-Y Boom mic/headset; Yaesu (HC-4)	85.90	
BM-10-5-I Boom mic/headset; Icom (HC-5) ..	85.90	
BM-10-5-K Boom mic/headset; Kenwood (HC-5) ..	85.90	
BM-10-5-Y Boom mic/headset; Yaesu (HC-5) .	85.90	
FS-1 Foot switch	24.95	
HS-1 Hand switch	19.95	
HC-4 DX'ers 'dream machine' mic element ...	28.90	
HC-5 Mic element for Icom SM-5/SM-6	28.90	
HM-10-4-I Microphone for Icom (HC-4)	85.90	
HM-10-4-K Microphone for Kenwood (HC-4) ..	85.90	
HM-10-4-Y Microphone for Yaesu (HC-4)	85.90	
HM-10-5-I Microphone for Icom (HC-5)	85.90	
HM-10-5-K Microphone for Kenwood (HC-5) ..	85.90	
HM-10-5-Y Microphone for Yaesu (HC-5)	85.90	
HM-10-Dual-I Microphone for Icom	131.90	
HM-10-Dual-K Microphone for Kenwood	131.90	
HM-10-Dual-Y Microphone for Yaesu	131.90	
MA-1 Clamp and arm for HM-10	49.95	
TB-1 Table base mic stand for HM-10	12.95	
B-4 Microphone boom (HC-4)	41.90	
B-5 Microphone boom (HC-5)	41.90	
B-4-I Microphone boom; Icom (HC-4)	47.90	
B-4-K Microphone boom; Kenwood (HC-4)	47.90	
B-4-T Mic boom; Ten-Tec (HC-4) .....Δm	47.90	34.95
B-4-Y Microphone boom; Yaesu (HC-4)	47.90	
B-5-I Microphone boom; Icom (HC-5)	47.90	
B-5-K Microphone boom; Kenwood (HC-5)	47.90	
B-5-Y Microphone boom; Yaesu (HC-5)	47.90	
CC-1-I Cable for Icom	21.90	
CC-1-K Cable for Kenwood	21.90	
CC-1-Y Cable for Yaesu	21.90	
SA-1 5w sound system w/active EQ	89.90	
FL-1 Flexlite .....Dm	22.90	14.95
FL-2 Flexlite .....Dm	32.50	22.95
Ham Radio Handbook	10.00	
Ear Pads .....pair	5.00	
Boom Clip	5.00	

HUSTLER (HUS)

RM-80 80m CW 400w PEP resonator	$ 26.95
RM-75 75m phone 400w PEP resonator	26.95
RM-40 40m 400w PEP resonator	24.95
RM-30 30m 400w PEP resonator	24.95
RM-20 20m 400w PEP resonator	21.95
RM-17 17m 400w PEP resonator	21.95
RM-15 15m 400w PEP resonator	15.95
RM-12 12m 400w PEP resonator	15.95

HUSTLER - continued

RM-11 11m 400w PEP resonator	15.95	
RM-10 10m 400w PEP resonator	15.95	
RMX-B Black 10m resonator w/mast	34.95	
RMX-W White 10m resonator w/mast	34.95	
RM-80S 80m CW 2kw PEP resonator	49.95	
RM-75S 75m phone 2kw PEP resonator	49.95	
RM-40S 40m 2kw PEP resonator	35.95	
RM-20S 20m 2kw PEP resonator	28.95	
RM-15S 15m 2kw PEP resonator	24.95	
RM-11S 11m 2kw PEP resonator	23.95	
RM-10S 10m 2kw PEP resonator	23.95	
MO-1 54" mast for fender or deck mount	31.95	
MO-2 54" mast for bumper mount	31.95	
MO-3 54" no break-over mast	23.95	
MO-4 22" mast for special applications	19.95	
VP-1 Tri-band adapter	5.95	
RSS-2 Resonator spring	9.95	
QD-2 Stainless quick disconnect	19.95	
L-14-144 12' RG-58, PL-259 to lugs	9.95	
L-14-240 20' RG-58, PL-259 to lugs	12.95	
LU-216 18' RG-58, PL-259s both ends	13.95	

STAINLESS 2" MOBILE BALL MOUNTS

SSM-1 Ball & spring, cadmium hardware	$ 46.95	
SSM-2 Ball, cadmium hardware	26.95	
SSM-3 Stainless steel spring	24.95	

1-1/2" MOBILE BALL MOUNTS

C-32 Chrome plated ball	$ 11.95	
C-30 Chrome plated spring	11.95	
C-29 Stainless steel spring	17.95	
BM-1 Single strap bumper mt w/C-32	21.95	

3/8-24 THREAD MOBILE MOUNTS

GCM-1 Rain gutter mount	$ 12.95	
HLM Trunk lip mount w/swivel	22.95	
HOT Hustloff trunk lip mt w/swivel	23.95	
MM-1 Cowl mount w/SO-239 & ⅜-24 base	14.95	
MM-3 Universal mount with 17' coax	21.95	
RVM Recreational vehicle mount	20.95	
TGM-1 Trunk grove mount	12.95	
TLM Trunk lip mount	21.95	

HF ANTENNAS

4-BTV 40/20/15/10m 21' trap vertical	$134.95	99.95
5-BTV 80/40/20/15/10m 25' trap vertical	179.95	129.95
30-MTK 30m trap kit for 4-BTV/5-BTV	41.95	
6-BTV 80/40/30/20/15/10m 24' trap vert	209.95	149.95
G-2537 10m 4.2db vertical antenna	134.00	99.95
VRK-1 Radial kit for HF verticals	37.95	

VHF BASE STATION ANTENNAS

G-3754 6m 4.2db vertical antenna	$134.00	99.95
G6-144B 2m 6 db 10' vertical antenna	139.95	109.95
G6-270R 2m/440 6db 7.6' base station ant ..	199.95	149.95
G7-144 2m 7 db 15' vertical antenna	199.95	149.95
G7-220 220 MHz 7 db 10' vertical antenna ...	189.95	139.95
G6-440 440 MHz 6 db 7' vertical antenna	179.95	129.95

SPIRIT VHF/UHF BASE ANTENNAS (Special Order)

HSU-14448 2m unity gain base antenna ...*T	$400.00	219.95
HS3-14448 2m 3db base antenna .....*T	495.00	319.95
HS6-14448 2m 6db base antenna .....*T	750.00	439.95
HS6-43050 430-450MHz 6 db base ant .....*T	697.00	379.95
HS9-43050 430-450MHz 9 db base ant .....*T	766.00	419.95
HS6-12430 1.2GHz 6 db base antenna .....*T	485.00	319.95
HS9-12430 1.2GHz 9 db base antenna .....*T	766.00	419.95
HS10-12430 1.2GHz 10 db base antenna ..*T	766.00	419.95
HS12-12430 1.2GHz 12 db base antenna ..*T	965.00	529.95

***Specify exact frequency and height above ground that the Spirit antenna will be mounted above surrounding terrain. These antennas are drop-shipped (shipped direct to you from the Hustler factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mineral Wells, Texas via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.**

VHF MOBILE ANTENNAS

BBL-144A 2m FM ¾" hole mt antenna, 3.4db	$ 39.95	
BBLT-144A 2m FM trunk lip mt ant, 3.4 db ...	47.95	
CG-144 2m FM ⅜-24 ant, 7' high, 5.2 db	31.95	

HUSTLER - continued

Item	Description	Reg	Sale
CGT-144	2m FM trunk mt ant, 7' high, 5.2db	51.95	49^{95}
CG-220	220 FM ⅜-24 antenna, 5.2 db	31.95	
CGT-220	220 MHz 5.2 db trunk mt antenna	51.95	49^{95}
FX-2	2m FM 3.4 db magnetic mt antenna	33.95	
FX-2B	2m FM 3.4 db black mag mt antenna	38.95	
FX-220	220 FM 3.4 db magnetic mt ant	33.95	
FX-220B	220 FM 3.4 db black mag mt ant	38.95	
FXM	FX-style magnet mount w/coax	19.95	
MKR-2	Radial kit for SF-2/CG-144	20.95	
RX-2	2m FM 3.4db magnetic mount ant	24.95	
RX-220	220 FM 3.4db magnetic mt antenna	24.95	
RX-440	440 FM 5 db magnetic mt antenna	24.95	
SF-2	2m FM ⅜-24 ant, 4' high, 3.4 db	14.95	
SF-220	220 MHz ⅜-24 antenna, 3 db	14.95	
THF	140-500 MHz ¼ wave trunk mount ant	23.95	
UGM	140-500 MHz ¼ wave BNC mag mt ant	21.95	
UHT-1	140-500 MHz ¼ wave roof mt ant	14.95	

HY-GAIN (HYG)

TRI-BAND BEAMS (20-15-10m)

Item	Description	Reg	Sale
398S	TH11DXS 11el 20/17/15/12/10m, 24' bm	$995.30	839^{95}
391S	TH7DXS 7el, 24'boom, 8.7db w/balun	733.30	619^{95}
393S	TH5Mk2S 5el, 19' boom, 8.5db, balun	629.30	529^{95}
395S	Explorer 14 4el, 14' boom, 8db, balun	486.70	409^{95}
396S	QK-710 10MHz or 40m EX add-on	153.30	139^{95}
221S-1	TH3JRS 3el, 12'boom, 750w PEP, 8db	306.70	259^{95}
390S	TH2Mk3S 2 el, 6' boom, 5.5 db	310.70	269^{95}

MONOBAND BEAMS

Item	Description	Reg	Sale
371S	Discoverer 7-1 30m or 40m rotatable dipole	$242.70	219^{95}
372S	Discoverer 7-2 40m 2el 23' boom 6.5db	544.00	459^{95}
373S	Discoverer 7-3 3rd el; 372S; 35' bm 8.7db	342.70	289^{95}
377S-1	205CA 20m 5el, 34' boom, 11.6db .T	609.30	519^{95}
394S	204BAS 20m 4 el, 26' boom, 10 db	444.00	379^{95}
226S	203BAS 20m 3 el, 16' boom, 8.5 db	266.70	229^{95}
376S	155B/CAS 15m 5 el, 26' boom, 12 db	344.00	289^{95}
236S	153BAS 15m 3 el, 12' boom, 8.5 db	164.00	149^{95}
375S	105B/CAS 10m 5 el, 24' boom, 12 db	226.70	199^{95}
239S-1	103BAS 10m 3 el, 8' boom, 8.5 db	118.70	109^{95}
1009AA	LP-1009AA 13-30 MHz 12 el LP ...m	1195.00	999^{95}

MULTI-BAND VERTICALS

Item	Description	Reg	Sale
188S	DX-88 8-band vertical antenna	$313.30	269^{95}
189S	GRK-88 Ground radial kit	62.70	
190S	RRK-88 Roof radial kit	80.00	
191S	160MK-88 160m kit for 188S	164.00	149^{95}
182S	18HTS Hy-Tower 5-band, 50' high .....T	681.30	599^{95}
LC-160Q	160m loading coil for Hy-Tower	53.05	49^{95}
385S	14AVQ/WBS 40/20/15/10m, 18'	148.00	139^{95}
384S	12AVQS 20/15/10m, 13.5' high	101.30	94^{95}
184	14RMQ Roof kit-12/14AVQ/S, 18AVT/S	61.30	
193S	18VS 80-10m trapless vert, 18' high	50.70	

MULTI-BAND DOUBLETS

Item	Description	Reg	Sale
380S	2BDQS 80/40m 101' trap doublet	$108.00	99^{95}
383S	5BDQS 80/40/20/15/10m 94' trap ant	217.30	189^{95}

VHF/UHF BASE STATION ANTENNAS

Item	Description	Reg	Sale
343S	66DX 6m 6el beam, 24' boom, 15 db	$209.30	189^{95}
230S-1	64DX 6m 4el beam, 12'boom, 12.7db	110.70	99^{95}
232S	215DX 2m 15el beam, 28'boom, 14.2db	237.00	174^{95}
214S-1	214FM 2m 14el beam, 15'boom, 13db	66.70	
208S-1	28FM 2m 8el beam, 12'boom, 11.8db	58.70	
205S-1	25FM 2m 5el beam, 6'boom, 9.1db	42.70	
203S-1	23FM 2m 3 el beam, 3.5'boom, 6.1db	33.30	
231S	70-31DX 430 31el beam, 24'bm, 17.6db	184.00	164^{95}
338	GPG2B 2m 3.4 db ground plane ant	38.70	
331S	V-42R 2m/440 3/5 db type N base ant	142.70	129^{95}
335S-1	V-2R 2m 3 db ground plane ant	93.30	84^{95}
336S	V-3S 220 3 db gnd plane ant ....Dmw	103.00	39^{95}
337S-1	V-4R 440 3 db ground plane ant	89.30	79^{95}

OSCAR LINK ANTENNAS

Item	Description	Reg	Sale
216S	216SAT 2m 16el 145.9MHz 11.5db bm	$186.70	169^{95}
215S	7030SAT 435 MHz 30 el 14 db beam	180.00	164^{95}
217	60" x 1½" fiberglass crossboom	65.30	
218S	OSCAR Link Complete Oscar ant sys	418.70	359^{95}

ACCESSORIES

Item	Description	Reg	Sale
155	CI Center insulator for doublets	$ 12.00	
156	EI 7" doublet end insulators ......pair	6.70	
157S	CIC Dipole center insulator w/SO-239	21.30	
242S	BN-86 80-10m balun	33.30	

HY-GAIN - continued

Item	Description	Reg	Sale
243S	BN-4000B 4kw PEP 160-10m beam balun	85.30	
244S	BN-4000D 4kw PEP 160-10m dipole balun	85.30	
245S	BN-4000N 4kw PEP 80-10m N beam balun	96.00	89^{95}
2400-155	62400155 Contester bm mic/headset	81.30	74^{95}
610-1	(Telex) 600 ohm headphones ....D*		9^{95}

HY-GAIN CRANK-UP TOWERS

Item	Description	Reg	Sale
129	HG-37SS 37' self-supporting tower .....T	1406.70	**1169**
125-1	HG-52SS 52' self-supporting tower ..T	2366.70	**1949**
130-1	HG-54HD 54' hvy duty self-support ..T	2866.70	**2369**
131-1	HG-70HD 70' hvy duty self-support ..T	4133.30	**3399**
116	HG-5 5' 2" OD .120 wall steel mast	73.30	
117	HG-10 10' 2" OD .120 wall steel mast .T	94.70	
118	HG-15 15' 2" OD .120 wall steel mast .T	152.00	149^{95}
121B	HG-TBT Thrust bearing w/sleeve	80.00	74^{95}
122	HG-COA Coax arm*, tower legs 1"-1½"	21.30	
	*One required per section		
140	HG-TOA Tilt-over 'gin-pole' ....T	670.70	569^{95}

Hy-Gain Towers are shipped PREPAID (Hy-Gain's expense) via truck direct from the factory (48 states). Any other Hy-Gain antennas, rotors, or accessories on the same order as a Hy-Gain tower will also be shipped PREPAID from the factory. On these drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise. This means at you may be billed before you receive your order. Please allow sufficient delivery time. Most truck lines will not unload the tower, so please be sure to have enough manpower and/or equipment on hand.

HY-GAIN ANTENNA ROTORS

Item	Description	Reg	Sale
305	AR-40 Solid state light duty rotor	$213.30	199^{95}
302	CD-45-II Medium duty rotor	298.70	279^{95}
304	HAM IV Heavy duty rotor	422.70	369^{95}
303	T²X Tailtwister extra heavy duty rotor	504.00	429^{95}
300	HDR-300 Deluxe digital hvy duty rotor	1104.00	949^{95}

OPTIONAL ACCESSORIES FOR ROTORS

Item	Description	Reg	Sale
51467-10	MSHD Lwr mast support; HAM IV/T²X	$ 73.30	
51472-10	MSLD Lwr mast support; CD45II/AR40	22.70	
50559-10	TSP-1 Tower spacing kit	20.70	

See BELDEN for rotor cable

ICOM (ICO)

Item	Description	Reg	Sale
IC-781	Xcvr/Rcvr/ps/auto tuner/spectrum scope	7208.00	CALL
FL-103	2.8 KHz SSB filter	89.00	
UT-36	Voice synthesizer	54.00	
IC-765	Xcvr/ps/keyer/auto tuner	3209.00	CALL
CR-282	High stability crystal unit	122.00	
FL-53A	250 Hz CW filter (2nd IF)	137.00	126^{95}
FL-101	250 Hz CW filter (1st IF)	96.00	
FL-102	6 KHz AM filter	68.00	
HM-36	Scanning hand mic	54.00	
MB-19	Rack mounting handles	54.00	
SM-6	Desk microphone	82.00	
SP-20	Speaker w/audio filter	179.00	169^{95}
UT-30	Tone encoder	40.00	
UT-36	Voice synthesizer	54.00	
FL-70	2.8 KHz wide SSB filter; 751A.........Δm	82.00	59^{95}
MB-18	Mobile mount for IC-751A ....Δm	43.00	32^{95}
IC-737	Xcvr/Rcvr/auto tuner/kyr/mic ..Dmwfv	1801.00	**1389**
IC-737A	Xcvr/SW Rcvr/tuner/keyer/mic/VOX	1801.00	CALL
	$100 coupon - IC-737/IC-737A thru 6/30/94		
PS-55	Power supply	265.00	244^{95}
PS-15	20A power supply	244.00	224^{95}
AH-3	Automatic antenna tuner	594.00	499^{95}
AH-2B	Bumper mt & whip for AH-3	248.00	229^{95}
AT-150	100w 9-band automatic ant tuner	539.00	459^{95}
CR-282	High stability crystal unit	122.00	
EX-1514	VOX unit for IC-737	67.00	
FL-52A	500 Hz CW filter (2nd IF)	137.00	126^{95}
FL-53A	250 Hz CW filter (2nd IF)	137.00	126^{95}
FL-100	500 Hz CW filter (1st IF)	96.00	
FL-101	250 Hz CW filter (1st IF)	96.00	
HM-36	Extra scanning hand mic	54.00	
MB-49	Mobile mounting bracket	43.00	
SM-6	Desk microphone	82.00	
SP-3	External speaker	82.00	
SP-7	Small external speaker	68.00	
SP-20	Speaker w/audio filter	179.00	169^{95}
SP-21	External speaker	83.00	
UT-30	Tone encoder	40.00	
IC-736	Xcvr w/6m/tuner/power supply	2250.00	CALL

ICOM - continued

Item	Description	Reg	Sale
EX-241	Marker unit for IC-745 ....Δm	26.00	
EX-242	FM unit for IC-745 ....Δm	42.00	
IC-735	Xcvr/SW Rcvr w/mic	1292.00	CALL
PS-55	Power supply	265.00	244^{95}
PS-15	20A power supply	244.00	224^{95}
AH-2	Antenna tuning sys w/bpr mt & whip	941.00	789^{95}
AH-2A	Antenna tuning system only	691.00	579^{95}
AT-150	100w 9-band automatic ant tuner	539.00	459^{95}
EX-243	Electronic keyer unit	82.00	
FL-32A	500 Hz CW filter	82.00	
FL-63A	250 Hz CW filter	68.00	
MB-5	Mobile mount	43.00	
SM-6	Desk microphone	82.00	
SP-3	External speaker	82.00	
SP-7	Small external speaker	68.00	
SP-20	Speaker w/audio filter	179.00	169^{95}
UT-30	Tone encoder	40.00	
IC-728	Xcvr/SW Rcvr w/mic	1160.00	CALL
	$100 coupon - IC-728 thru 6/30/94		
IC-729	Xcvr/SW Rcvr w/6m	1521.00	CALL
PS-55	Power supply	265.00	244^{95}
PS-15	20A power supply	244.00	224^{95}
AH-3	Automatic antenna tuner	594.00	499^{95}
AH-2B	Bumper mt & whip for AH-3	248.00	229^{95}
AT-160	Attached automatic ant tuner	442.00	379^{95}
CR-64	High stability oscillator crystal	96.00	
EX-1514	VOX unit	67.00	
FL-100	500 Hz CW filter	96.00	
FL-101	250 Hz CW filter	96.00	
MB-5	Mobile mount	43.00	
SM-6	Desk microphone	82.00	
SP-3	External speaker	82.00	
SP-7	Small external speaker	68.00	
SP-20	Speaker w/audio filter	179.00	169^{95}
UI-7	AM/FM module for IC-728	82.00	
UT-30	Tone encoder	40.00	
IC-725	Xcvr/SW Rcvr w/mic	972.00	CALL
	$50 coupon - IC-725 thru 6/30/94		
PS-55	Power supply	265.00	244^{95}
AH-3	Automatic antenna tuner	594.00	499^{95}
AH-2B	Bumper mt & whip for AH-3	248.00	229^{95}
CR-64	High stability oscillator crystal	96.00	
EX-1514	VOX unit	67.00	
FL-100	500 Hz CW filter	96.00	
FL-101	250 Hz CW filter	96.00	
MB-5	Mobile mount	43.00	
SM-6	Desk microphone	82.00	
SP-20	Speaker w/audio filter	179.00	169^{95}
SP-21	External speaker	83.00	
UI-7	AM/FM module	82.00	
UT-30	Tone encoder	40.00	
IC-707	Xcvr/SW Rcvr w/mic	1032.00	CALL
	$50 coupon - IC-707 thru 6/30/94		
PS-55	Power supply	265.00	244^{95}
PS-15	20A power supply	244.00	224^{95}
AH-3	Automatic antenna tuner	594.00	499^{95}
AH-2B	Bumper mt & whip for AH-3	248.00	229^{95}
AT-160	Attached automatic ant tuner	442.00	379^{95}
EX-1514	VOX unit	67.00	
FL-52A	500 Hz CW filter (2nd IF)	137.00	126^{95}
FL-53A	250 Hz CW filter (2nd IF)	137.00	126^{95}
MB-5	Mobile mount	43.00	
SM-6	Desk microphone	82.00	
SP-3	External speaker	82.00	
SP-7	Small external speaker	68.00	
SP-20	Speaker w/audio filter	179.00	169^{95}

On major products ask your salesperson about...

- **Late Breaking "Hot Deals"**
- **Latest Sale Prices**
- **Monthly specials**
- **Coupons, etc.**

Info also available on the **AES**® BBS
1-414-358-3472

ICOM - continued

	Reg	Sale
SP-21 External speaker	83.00	
UI-9 FM module	82.00	
UT-30 Tone encoder	40.00	
IC-2KL 160-15m/WARC solid state linear	2349.00	CALL
IC-4KL 1kw output solid state linear	8021.00	CALL
OPC-118 Adapter; 2KL/4KL; 725/735/765	17.99	
AH-2 Antenna tuning sys w/bpr mt & whip	941.00	789.95
AH-2A Antenna tuning system only	691.00	579.95
OPC-137 Adapter; AH-2/2A to IC-751A/745	17.99	
AT-150 100w 9-band automatic ant tuner	539.00	459.95
OPC-137 Adapter; AT-150 to IC-751A/745	17.99	
AT-500 500w 9-band automatic ant tuner	705.00	599.95
OPC-118 Adapter; AT-500; 725/735/765/781	17.99	

SHORTWAVE RECEIVERS

R-1 100KHz-1.3GHz AM/FM handheld Rcvr	$577.00	CALL
HP-4 Lightweight headphones	21.00	
Note: R-1 uses 'S'-series HT accessories		
R-71A 100 KHz - 30 MHz dig keyboard Rcvr	1279.00	CALL
CK-70 (EX-299) 12v DC option	21.00	
CR-64 High stability oscillator crystal	96.00	
EX-257 FM unit	59.00	
EX-310 Voice synthesizer	69.00	
FL-32A 500 Hz CW filter	82.00	
FL-44A SSB filter	206.00	186.95
FL-63A 250 Hz CW filter	68.00	
MB-12 Mobile mount	43.00	
RC-11 Infrared wireless remote control	85.00	
SP-3 External speaker	82.00	
UI-8 FM unit for R-72 Δm	73.00	59.95
R-100 100KHz-1.856GHz AM/FM 12v Rcvr	787.00	CALL
AD-15A Power supply	48.00	
AH-7000 25-1000 MHz discone antenna	117.00	
CP-11 Cig cord w/noise filter	29.00	
HP-4 Lightweight headphones	21.00	
R-7000* 25 MHz - 2 GHz scanning receiver	1532.00	CALL
AH-7000 25-1000 MHz discone antenna	117.00	
CK-70 (EX-299) 12v DC option	21.00	
EX-310 Voice synthesizer	69.00	
MB-12 Mobile mount	43.00	
RC-12 Infrared wireless remote control	85.00	
SP-3 External speaker	82.00	
TV-R7000 ATV unit for R-7000	207.00	189.95
R-7100-1 25 MHz - 2 GHz scanning receiver	1617.00	CALL
AH-7000 25-1000 MHz discone antenna	117.00	
MB-5 Mobile mount	43.00	
MB-23 Carrying handle	11.00	
SP-3 External speaker	82.00	
SP-7 Small external speaker	68.00	
SP-20 Speaker w/audio filter	179.00	169.95
TV-R7100 TV/FM adapter	248.00	229.95
UT-36 Voice synthesizer	54.00	
R-9000* .1-1999.8MHz Rcvr/spectrum scope	6389.00	CALL

*After present stock is gone, Federal and state government agencies and communications utility companies **ONLY** may purchase R-7000 or R-9000, drop-shipped from Icom. Mail or FAX purchase order to AES.

SP-20 Speaker w/audio filter	179.00	169.95
UT-36 Voice synthesizer	54.00	

6m TRANSCEIVERS

IC-575H 100w 6 & 10m FM/SSB/CW Xcvr	2021.00	CALL
AH-610 Dual band 6/10m base antenna	137.00	
EX-20 6/10m automatic ant selector	96.00	
CR-64 High stability oscillator crystal	96.00	
FL-100 500 Hz CW filter	96.00	
FL-101 250 Hz CW filter	96.00	
FL-102 6 KHz AM filter	68.00	
PS-55 Power supply for IC-575H	265.00	244.95
UT-36 Voice synthesizer	54.00	

2m TRANSCEIVERS

IC-28H 45w 2m FM Xcvr w/TTP mic	$459.00	CALL
IC-228H 45w 2m FM Xcvr w/TTP mic ..Dmwfv	455.00	359.95
UT-40 Tone squelch decoder; 228H	54.00	
IC-281H 50w 2m FM Xcvr/TTP/9600 baud	462.00	CALL
UT-66 Voice synthesizer	42.00	
IC-275H 100w 2m FM/SSB/CW Xcvr	1712.00	CALL
AG-25 Mast mounted GaSFET preamp	154.00	144.95
CR-64 High stability oscillator crystal	96.00	
EX-1514 VOX unit	67.00	

ICOM - continued

	Reg	Sale
FL-83 CW filter	109.00	
PS-55 Power supply	265.00	244.95
UT-34 Tone squelch unit	68.00	
UT-36 Voice synthesizer	54.00	
IC-2330A 45w 2m/25w 220 FM Xcvr/TTP	911.00	CALL
IC-3230H 45w 2m/35w 440 FM Xcvr/TTP	799.00	CALL
HM-56A Extra autodial TTP mic	83.00	
UT-55 DTMF tone encoder/decoder unit	42.00	
UT-66 Voice synthesizer; 2330A/3230A/H	42.00	
UT-67 Tone squelch unit	68.00	
IC-2340 45w 2m/35w 440 FM Xcvr/TTP mic	799.00	CALL
UT-55 DTMF tone encoder/decoder unit	42.00	
UT-66 Voice synthesizer	42.00	
IC-2700H 50w 2m/35w 440 FM Xcvr/TTP mic	959.00	CALL
IC-820H 2m/430 SSB/FM satellite Xcvr/9600	1999.00	CALL
IC-Delta-100H 2m/440/1.2 GHz FM Xcvr/TTP	1689.00	CALL
MB-50 Remote controller bracket	21.00	
OPC-332 11.5' separation kit	22.00	
OPC-333 23' separation kit	27.00	
OPC-335 16.4' speaker cable	29.00	
OPC-347 23' DC power cable	34.00	
UT-66 Voice synthesizer	42.00	
UT-75 DTMF decoder unit	42.00	
UT-76 Tone squelch unit	87.00	
AH-32 2m/440 dual band mobile antenna	54.00	
Larsen **PO-K** Roof mt, coax for AH-32	23.00	
Larsen **PO-MM** Magnet mt, coax; AH-32	30.40	
Larsen **PO-TLM** Trunk lip mt, coax; AH-32	26.35	
Icom **AHB-32** Trunk lip mt, coax; AH-32	40.00	

Accessories for IC-u2AT

BC-50 Desk quick cgr; not for BP-20 Δm	$ 40.00	
BP-23 600ma 8.4v long life battery Δm	37.00	
IC-2AT 1.5w 2m FM HT/batt/cgr/TTP	359.00	CALL
IC-02AT/HP 5w 2m FM HT/batt/cgr/TTP ...Dmfv	371.00	239.95
IC-2GAT Dlx 1/7w 2m FM HT/batt/cgr/TTP	425.00	CALL
AD-12 External pwr adapter; 2/4GAT/32AT	31.00	
BA-10 Bottom slide cap	10.00	
BC-16U Wall charger; BP-5A/7/8 only	25.00	
BC-25U Extra wall charger; BP-3 only	25.00	
BC-35 Drop-in rapid charger; all batteries	105.00	
BP-2* 425ma 7.2v long life batt; all HTs	60.00	
BP-3 250ma 8.4v battery; all HTs	47.00	
BP-4 Alkaline battery case; all HTs	20.00	
BP-5* 425ma 10.8v high power batt; all HTs	73.00	
*BC-35 required to charge BP-2/5		
BP-5A 425 ma 10.8v direct charge batt; all	73.00	
BP-7 425ma 13.5v 5w batt; deluxe HTs only	87.00	
BP-8 800ma 8.4v long life batt; all HTs	87.00	
BP-70* Extra 270ma 13.2v batt; 2GAT/32AT	82.00	
*BP-70 9-hours max charge time in BC-35		
CM-12 Alkaline batt case (10 AAs); dlx HTs	30.00	
CP-1 Cig cgr; BP-3/7/8//DC cord; dlx HTs	21.00	
CP-10 Battery separation cable w/clip	29.00	
CP-11 Cig cord w/noise filter; dlx HTs	29.00	
DC-1 DC operation module; std HTs	29.00	
FA-2 Extra 2m flexible antenna	21.00	
FA-140B Extra 2m flex ant for IC-2GAT	21.00	
FA-1443B Extra 2m/440 dual band flex ant	21.00	
HH-SS Handheld shoulder strap	21.00	
HM-9 Speaker/mic; all HTs	53.00	
HM-46 Slim-line speaker/mic	40.00	
HM-46L Slim-line spkr/mic for 2GAT	40.00	
HS-10 Boom mic/headset	40.00	
HS-10SA VOX unit (deluxe HTs only)	40.00	
HS-10SB PTT switchbox	40.00	
HS-51 Headset w/VOX	67.00	
LC-02AT Leather case; dlx HTs w/BP-7/8 ...Δm	28.00	
LC-2GAT Leather case for IC-2GAT Δm	28.00	
LC-11 Vinyl case; deluxe HTs w/BP-3 ....Δm	17.00	
LC-12 Vinyl case; dlx HTs w/BP-5 Δm	12.00	
LC-14 Vinyl case for deluxe HTs w/BP-7/8	24.00	
LC-32AT Leather case for IC-32AT Δm	26.00	
LC-38 Vinyl case; 2GAT w/BP-2/3/4 Δm	17.00	
LC-39 Vinyl case: 2GAT w/BP-5/70	22.00	
LC-40 Vinyl case; 2GAT w/BP-5A/7/8	21.00	
LC-41 Vinyl case; 32AT w/BP-2/3/4 Δm	17.00	
LC-42 Vinyl case; 32AT w/BP-5/70 Δm	17.00	
LC-43 Vinyl case; 32AT w/BP-5A/7/8 ....Δm	22.00	
MB-16 Window/car door mount	29.00	

ICOM - continued

	Reg	Sale
MB-16D Mobile mtg bkt for all HTs	29.00	
MB-24 Window/car door mt; 2GAT	29.00	
RB-1 Vinyl waterproof radio bag	39.00	
UT-40 Tone squelch decoder; 2GAT/32AT	54.00	
IC-P2AT Mini 2m FM HT/batt/cgr/TTP	419.00	CALL
BC-80 Desk cgr; BP-112-114, BP-81-85	132.00	
BC-74 Extra wall charger; BP-111-114	25.00	
BP-110 Alkaline battery case	21.00	
BP-111 Extra 7.2v 400ma 1.5w battery	62.00	
BP-112 7.2v 700ma 1.5w battery	68.00	
BP-113 7.2v 1200ma 1.5w battery	90.00	
BP-114 12v 400ma 5w battery	104.00	
CP-12 Cig lighter cable w/filter	21.00	
HM-9 Speaker/microphone	53.00	
HM-46 Slim-line microphone	40.00	
HM-54 Heavy duty speaker/mic	55.00	
HS-51 Headset w/VOX	67.00	
LC-91 Vinyl case; BP-111	25.00	
LC-92 Vinyl case; BP-110/112 Δm	17.00	
LC-93 Vinyl case: BP-113/114 Δm	17.00	
MB-30 Mobile/wall bracket	29.00	
OPC-254 Mini DC power cable	9.00	
UT-49 DTMF decoder unit	54.00	
IC-2iA 2m FM HT/batt/cgr	387.00	CALL
$50 coupon - IC-2iA thru 6/30/94		
AD-26 Adapter for BC-79A w/BP-121-124	12.00	
BC-79A Desk charger (adapter required)	132.00	
BP-120 AA alkaline battery case	21.00	
BP-121 7.2v 400ma battery	62.00	
BP-122 7.2v 700ma battery	64.00	
BP-123 7.2v 1200ma battery	90.00	
BP-124 12v 400ma battery	104.00	
CP-13L Cigarette lighter cable	22.00	
HM-9L Speaker/mic	53.00	
HM-46L Speaker/mic w/ear jack	40.00	
HM-55A Speaker/mic w/TTP	69.00	
HS-51 Headset w/VOX	67.00	
LC-83 Vinyl case for BP-121	25.00	
LC-84 Vinyl case for BP-120/122	25.00	
LC-85 Vinyl case for BP-123/124	25.00	
MB-30 Mobile/wall bracket	29.00	
OPC-288L DC power cable	14.00	
IC-V21AT 2m/220 FM HT/batt/cgr/TTP	783.00	CALL
$50 coupon - IC-V21AT thru 6/30/94		
IC-W21A 2m/440 FM HT/batt/cgr	572.00	CALL
IC-W21AT 2m/440 FM HT/batt/cgr/TTP	623.00	CALL
$65 coupon - IC-W21AT thru 6/30/94		
AD-25 Battery charger adapter	32.00	
AD-28 Batt pack adapter for rapid charger	12.00	
BC-77 Extra wall cgr	26.00	
BC-79A Desk charger (adapter required)	132.00	
BP-130 Battery case	21.00	
BP-131 900ma 7.2v battery	96.00	
BP-132 600ma 12v battery	109.00	
CP-13 Cig cable w/filter	22.00	
HM-9 Speaker/microphone	53.00	
HM-46 Slim-line speaker/mic	40.00	
HM-54 Hvy duty spkr/mic	55.00	
HM-55A Speaker/mic w/TTP	69.00	
HM-75 Speaker/mic w/remote control	55.00	
HS-51 Headset w/VOX	67.00	
LC-103 Vinyl case; IC-W21A w/BP-130/131	25.00	
LC-104 Vinyl case; IC-W21A w/BP-132	25.00	
LC-105 Vinyl case; IC-W21AT w/BP-130/131	25.00	
LC-106 Vinyl case; IC-W21AT w/BP-132	25.00	
MB-30 Mobile/wall bracket	29.00	
OPC-288 Mini DC pwr cord	14.00	
IC-2SAT 2/5w 2m FM HT/batt/cgr/TTP	372.00	CALL
IC-2SRA 2/5w 2m HT/25-905MHz Rcvr Dmwfv	612.00	499.95
IC-24AT 2/5w 2m/440 FM HT/batt/cgr/TTP Dm	483.00	369.95
IC-W2A 2/5w 2m/440 FM HT/batt/cgr/TTP	579.00	CALL
$30 coupon - IC-W2A thru 6/30/94		
AD-14 BC-74 charge adapter	31.00	
AD-20 BC-77 charge adapter	32.00	
AH-20 Replacement rcv ant for IC-2SRA	17.00	
BA-11 Bottom cap	8.00	
BA-12 Drop-in charger adapter	21.00	
BC-72 Rapid desk charger	115.00	
BC-74 Extra wall cgr; 24AT & S-series	25.00	

ICOM - continued

	Reg	Sale
BC-77 Extra wall cgr; W2A/2SRA	26.00	
BP-81 7.2v 110ma battery	47.00	
BP-82 7.2v 300ma battery	60.00	
BP-83 7.2v 600ma battery	65.00	
BP-84 7.2v 1000ma battery	87.00	
BP-85 12v 340ma 5w battery	113.00	
BP-90 AA battery case	20.00	
CP-12 Cig lighter cable w/filter	21.00	
CP-13 Cig cable w/filter; W2A/2SRA	22.00	
HM-9 Speaker/microphone	53.00	
HM-46 Slim-line speaker/mic	40.00	
HM-54 Hvy duty spkr/mic; not for 2G/W2A	55.00	
HM-65 Slim-line spkr/mic; W2A/2SRA	42.00	
HM-70 Speaker/mic; W2A/2SRA	42.00	
HS-51 Headset w/VOX	67.00	
HS-60 VOX headset; W2A/2SRA	76.00	
LC-24(L) Leather case; 24AT/BP-85 ..Δm	26.00	
LC-53 Vinyl case; 2SA w/no battery ..Δm	21.00	14.95
LC-55 Vinyl case; 2SA/BP-82/83/90 ..Δm	21.00	14.95
LC-56 Vinyl case; 2SA w/BP-84/85 ..Δm	21.00	14.95
LC-57 Vinyl case; 2SAT w/no battery	25.00	
LC-59 Vinyl case; 2SAT w/BP-82/83/90	25.00	
LC-61 Vinyl case; 2SAT w/BP-84/85	25.00	
LC-63 Vinyl case; 24AT/BP-81/BA-11 ..Δm	17.00	
LC-65 Vinyl case; 24AT/BP-82/83/90 ..Δm	17.00	
LC-66 Vinyl case; 24AT w/BP-84/85	25.00	
LC-71 Case; W2A/2SRA w/BP-81/BA-11	25.00	
LC-72 Case; W2A/2SRA w/BP-82/83/90	25.00	
LC-73 Case; W2A/2SRA w/BP-84/85	25.00	
LC-SAT(L) Leather case; 2SAT w/BP-85 .Δm	28.00	
MB-22 Alligator belt/pocket clip	11.00	
MB-25 Stainless steel wall storage unit	30.00	
MB-30 Mobile/wall bracket	29.00	
OPC-254 Mini DC power cable	9.00	
OPC-288 Mini DC pwr cord; W2A/2SRA	14.00	
UT-49 DTMF decoder unit for S-series	54.00	
UT-50 Tone decoder	54.00	
UT-51 Programmable tone encoder unit	48.00	
IC-2GXAT 2m FM HT/batt/cgr/TTP	359.00	CALL
AD-25 Battery charger adapter	32.00	
AD-28 Batt pack adapter for rapid charger	12.00	
BC-79A Desk charger (adapter required)	132.00	
BP-130A Battery case	21.00	
BP-132A 600ma 12v battery	109.00	
BP-157A 900ma 7.2v battery	54.00	
BP-160 700ma 7.2v battery	43.00	
LC-116 Carrying case; BP-130A/157A/160	25.00	
LC-117 Carrying case for BP-132A	25.00	
SP-13 Earphone	3.00	
UT-49 DTMF decoder unit	54.00	
IC-Delta-1A 2m/440/1.2 FM HT/batt/cgr/TTP	1199.00	CALL
$100 coupon - IC-Delta-1A thru 6/30/94		
AD-22 External battery charge adapter	32.00	
AD-27 Charge adapt; BP-101 - 103/BC-79	12.00	
BP-100 Battery holder	21.00	
BP-101 700ma 7.2v battery	68.00	
BP-102 1200ma 7.2v battery	90.00	
BP-103 600ma 12v battery	104.00	
UT-70 Tone encoder/decoder	82.00	
IC-T21A 2m FM HT/batt/cgr/TTP	393.00	CALL
AD-44 Adapter	12.00	
BP-151 800ma 6v battery	40.00	
BP-152 1100ma 6v battery	46.00	
BP-153 600ma 12v battery	109.00	
BP-159 Battery case	21.00	
LC-109 Vinyl case for BP-151/159	25.00	
LC-110 Vinyl case for BP-153	25.00	
LC-111 Vinyl case for BP-152	25.00	
RP-1520 25w 2m FM repeater	2555.00	CALL

220 MHz TRANSCEIVERS

IC-03AT 2.5w 220 HT/batt/cgr/TTP	$388.00	CALL
IC-3SAT 2/5w 220 HT/batt/cgr/TTP	400.00	CALL
~~**IC-P3AT** Mini 220 FM HT/batt/cgr/TTP ..Dm~~	~~452.00~~	~~339.95~~
~~**$30 coupon - IC-P3AT thru 6/30/94**~~		
IC-03AT uses same accessories as IC-02AT/HP		
IC-3SAT uses same accessories as IC-2SAT		
~~IC-P3AT uses same accessories as IC-P2AT~~		
IC-38A 25w 220 FM Xcvr w/TTP mic	501.00	CALL
$20 coupon - IC-38A thru 6/30/94		
RP-2210 25w 220 MHz FM repeater	2173.00	CALL

430/440 MHz TRANSCEIVERS

IC-4GAT Dlx 1/6w 440 HT/batt/cgr/TTP	$428.00	CALL
IC-4SAT 2/5w 440 HT/batt/cgr/TTP ..Dmv	475.00	389.95
IC-4SRA 2/5w 440 HT/25-905MHz Rcvr Dmwv	631.00	489.95
IC-4GXAT 440 FM HT/batt/cgr/TTP	369.00	CALL
IC-P4AT Mini 440 FM HT/batt/cgr/TTP	504.00	CALL
$50 coupon - IC-P4AT thru 6/30/94		
IC-4iA 440 FM HT/batt/cgr	460.00	CALL
$75 coupon - IC-4iA thru 6/30/94		
IC-T41A 440 FM HT/batt/cgr/TTP	472.00	CALL
IC-X2A 5/1w 440/1.2 FM HT/batt/cgr/TTP	772.00	CALL
$25 coupon - IC-X2A thru 6/30/94		
IC-X21AT 440/1.2 FM HT/batt/cgr/TTP	796.00	CALL
IC-4GAT uses same accessories as IC-2GAT		
IC-4SAT uses same accessories as IC-2SAT		
IC-4SRA uses same accessories as IC-2SRA		
IC-4GXAT uses same accessories as IC-2GXAT		
IC-P4AT uses same accessories as IC-P2AT		
IC-4iA uses same accessories as IC-2iA		
IC-T41A uses same accessories as IC-T21A		
IC-X2A uses same accessories as IC-W2A		
IC-X21AT uses same accessories as IC-W21AT		
IC-449A 35w 440 FM Xcvr w/TTP mic	592.00	CALL
IC-475H 75w 430-450 FM/SSB/CW Xcvr	1957.00	CALL
AG-35 Mast mounted preamp	159.00	149.95
CR-64 High stability oscillator crystal	96.00	
EX-1514 VOX unit	67.00	
FL-32A CW filter	82.00	
PS-55 Power supply	265.00	244.95
UT-34 Tone squelch unit	68.00	
UT-36 Voice synthesizer	54.00	
RP-4020 25w 440 MHz FM repeater	2637.00	CALL
RP-4020/50w 50w 440 MHz FM repeater	2853.00	CALL

1.2 GHz TRANSCEIVERS

IC-12GAT 1w 1.2GHz HT/batt/cgr/TTP .Dmwfv	$505.00	379.95
FA-1240T Extra flexible ant for IC-12GAT	21.00	
Note: IC-12GAT uses same accessories as IC-2GAT		
IC-1201 10w 1.2 GHz FM Xcvr ..Dm	896.00	499.95
CR-263 High stability unit; IC-1275A ..Δm	123.00	49.95
TV-1275 ATV adapter for IC-1275A ..Δm	276.00	119.95
RP-1220 10w 1.2 GHz FM repeater	2976.00	CALL

MULTI-BAND FM TRANSCEIVER

IC-901 Fiber optic 50w 2m/35w 440 FM Xcvr	1141.00	CALL
EX-766 Interface & cable for trunk mtg	54.00	
EX-767 Power cable connector box	48.00	
MB-21 Bracket for controller unit	19.00	
MB-31 Mounting bkt for band units	14.00	
MB-32 Mobile mount for trunk	21.00	
OPC-189 Optical fiber cable 65' extension	74.99	
OPC-243 30' DC cable	33.49	
UT-40 Tone squelch decoder	54.00	
UT-48 DTMF encoder/decoder unit	54.00	
UX-R91A 50-905 MHz receiver unit	584.00	489.95
UX-19A 10w 10m unit	343.00	299.95
UX-59A 10w 6m unit	400.00	339.95
UX-S92A 2m SSB/CW module	679.00	569.95
UX-39A 25w 220 unit	516.00	439.95
UX-129A 10w 1.2 GHz unit	624.00	529.95

MULTI-BAND ALL-MODE TRANSCEIVERS

IC-970A 25w 2m/430 Xcvr w/ps	3665.00	CALL
IC-970H 45w 2m/430 Xcvr w/ps	3964.00	CALL
$250 coupon - IC-970A/IC-970H thru 6/30/94		
AG-25 2m mast mounted GaSFET preamp	154.00	144.95
AG-35 430 MHz mast mounted preamp	159.00	149.95
AG-1200 1.2 GHz mast mounted preamp	137.00	
CR-293 High stability xtal unit	276.00	256.95
EX-243 Electronic keyer unit	82.00	
FL-132 Main band CW filter	96.00	
FL-133 Sub band CW filter	96.00	
MB-19 Rack mounting handles	54.00	
PS-15 20A power supply	244.00	224.95
PS-55 Power supply	265.00	244.95
SP-20 Speaker w/audio filter	179.00	169.95
TV-970 1.2 GHz ATV unit for IC-970A/H	381.00	349.95
UT-34 Tone squelch unit	68.00	
UT-36 Voice synthesizer	54.00	

ICOM - continued

	Reg	Sale
UX-R96 50-905 MHz receive unit	448.00	379.95
UX-97 1.2 GHz band unit	1141.00	959.95
UX-98 2.4 GHz module **(Special Order)**	1671.00	1419

ACCESSORIES

CT-16 Satellite interface unit	$115.00	
CT-17 CI-V level converter	115.00	
UX-14 CI-IV/CI-V converter for CT-17	86.00	
DM-10 Combination probe multimeter ..Dm	62.00	19.95
EX-309 Interface plug; 751/271/R71A ..Δm	69.00	29.95
EX-310 Voice synthesizer	69.00	
EX-627 HF auto ant selector; up to 7 ants	373.00	344.95
HM-5 Noise canx mobile mic, 4-pin ..Δm	68.00	29.95
HM-7 Amplified mobile mic, 8-pin	54.00	
HM-8 TTP microphone, 8-pin	72.00	
HM-12 Scan hand microphone	54.00	
HM-14 Scan/TTP mic; 25A/H/28A/45A	82.00	
HS-15 Goose neck mobile microphone	54.00	
HS-15SB PTT switchbox	32.00	
MB-23 Side mount carrying handle	11.00	
OPC-047 24-pin optional accessory cord	16.50	
OPC-137 24-pin adapter cable; all base Xcvrs	17.99	
PS-30 20A systems ps w/6-pin cord	407.00	369.95
OPC-052 2-pin cord	10.50	
OPC-053 4-pin cord	10.50	
PS-45 Compact 8A power supply	176.00	166.95
SM-6 Electret desk microphone	82.00	
SM-8 2-connector desk mic w/up/down scan	123.00	
SM-20 Stand mic for base stations	165.00	154.95
SP-3 External speaker	82.00	
SP-5 Mobile speaker	39.00	
SP-7 Small external speaker	68.00	
SP-10 Slim-line external speaker	43.00	
SP-12 Slim-line speaker w/visor clip	32.00	
SP-20 Speaker w/audio filter	179.00	169.95

INNOVA (INN)

06-1101 12vdc 6.5 amp/hour power pack	$ 61.52	49.95
06-9509 AC/DC adapter	13.62	9.95
06-1130 Compact 12vdc 3 amp/hr pack/adapt	61.50	49.95

INTERFLEX (INT)

dspGOLD Software for AEA DSP-2232	$129.95	
KaGOLD DualPort Software for KPCs & KAM	79.95	
KaGOLD DualPort **w/Pac**tor Software; KPC/KAM	99.95	
PkGOLD Enhanced Software; PK-88/PK-232	79.95	
PkGOLD w/Pactor Software for PK-232MBX	99.95	
PkGOLD DualPort Software; PK-88/PK-232	129.95	
PkGOLD/900 Software for PK-900	129.95	

J-COM (JCO)

HB12 HamBase 1.2 5¼" IBM U.S. hams data	$ 54.95	49.95
HB144 HamBase 1.44 3½" IBM U.S. hams data	54.95	49.95
VQ Ventriloquist voice keyer, in enclosure	154.95	149.95
VQPCB Ventriloquist PC board only	134.95	129.95

JPS (JPS)

NF-60 Auto DSP audio spectral notch filter	$160.00	
NIR-10 Dlx noise/notch DSP bandpass filter	349.95	
NRF-7 Noise remover and filter unit	249.95	
NTR-1 Wide band noise and tone remover	169.95	
SSTV-1 DSP slow scanTV filter ..m	160.00	
Power Pack 115vac/12vdc adapter	16.00	

JRC (JRC)

NRD-535 HF receiver ..Δm	1429.00	1099
JST-135HP Deluxe model transceiver ..Dm	3049.00	2349
JST-135 Standard model transceiver ..Dm	1739.00	1339
CCL-212 Tone squelch; JST-135/135HP .Δm	107.00	79.95
CDD-366 Notch follow unit; JST-135 ..Δm	97.00	69.95
CFL-218A 1.8 KHz crystal IF filter; all ..Δm	154.00	109.95
CFL-231 300 Hz crystal IF filter; all ..Δm	154.00	109.95
CFL-232 500 Hz crystal IF filter; all ..Δm	154.00	109.95

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JRC - continued

	Reg	Sale
CFL-233 1 KHz crystal filter; not 135HP Δm	154.00	109.95
CFL-243 Bandwidth control; JST-135 .....Δm	399.00	289.95
CFL-251 2.4 KHz crystal IF filter; all .....Δm	154.00	109.95
CFQ-3003 Transceive cable set .....Δm	122.00	89.95
CMF-78 ECSS unit .....Δm	264.00	189.95
CMH-365 Extender board; all radios .....Δm	150.00	129.95
CMH-741 RS-232C interface; 135/135HP Δm	189.00	139.95
CMH-742 Daughter board; JST-135 .....Δm	68.00	49.95
NBD-520 DC power supply; JST-135 .....Δm	399.00	289.95
NFG-97 Antenna tuner; JST-135/135HP Δm	348.00	249.95
NFG-230 Auto ant tuner; 135/135HP .....Dm	717.00	519.95
NVA-88 External speaker; all radios .....Δm	65.00	49.95
NVT-56 Desk mic; JST-135/135HP .....Δm	104.00	79.95
NVT-58 Hand microphone; JST-135 .....Δm	40.00	29.95
ST-3 Deluxe headphones; all radios .....Δm	77.00	59.95
6ZCJD00139 RTTY ptr cbl; NRD-525 .....Δm	68.00	39.95
6ZCJD00350 RS-232C interface cbl; 535D Δm	68.00	39.95
JRL-2000F 160-12m HF linear	4899.00	3999
CFQ-3889 General purpose control cable ...	49.00	
CFQ-3890 JST-135 control cable	68.00	

JSC (JSC)

ROTOR CABLE

JRR-420 4-wire; U-105/U-110 .....Δw, per ft.		17¢
JRR-420 .....Δw, **100** ft. Roll		14.95
JRR-420 .....Δw, **500** ft. Roll		49.95
JRR-520 5-wire; AR-40 .....Δmw, per ft.		19¢
JRR-520 .....Δmw, **100** ft. Roll		16.95
JRR-520 .....Δmw, **500** ft. Roll		59.95
JRR-520 .....Δmw, **1000** ft. Roll		99.95

COAX ASSEMBLIES w/PL-259s

JFB-58-12LP 12' RG-58U, PL-259 - lugs .Dmwfv	$ 6.99	2.95
JFB-58-20LP 20' RG-58U, PL-259 to lugs .Dmw	8.49	4.95
JFA-08Q-12LP 12' RG-8X, PL-259 - lugs ..Dmwf	7.95	3.95

K-COM (KCO)

RF-1 Modular telephone RFI filter	$ 16.95
RF-1/2-line Two-line modular RFI filter	22.95
RF-1/coiled Coiled cord modular RFI filter	22.95
RF-2 Hard-wired telephone RFI filter	10.95

KLM (KLM)

ANTENNAS

160V 160, 80 or 40m vertical, 24' high	$268.00		249.95
80M-1 80m rotatable dipole, 90' long .....*T	879.00		699.95
80M-1R 80m rotatable dipole w/relays .....*T	1235.00		999.95
80M-2 80m 2 el beam, 36' boom, 4 db .....*T	2895.00		2369
80M-2R 80m 2 el beam w/relays .....*T	3581.00		2899
80M-3 80m 3 el beam, 60' boom, 7 db .....*T	4792.00		3998
80M-3R 80m 3 el beam w/relays .....*T	5714.00		4899
SSV-80-40-15 80/40/15m vert, 65' high ...*T	860.00		699.95
6-12-8LPA 6-12 MHz 8el LP, 36' boom .....*T	2414.00		1969
Heavy duty boom only for **6-12-8LPA** .....*T	490.00		419.95
6-12-8LPA w/Heavy duty boom .....*T	2606.00		2249
6-30-15LPA 6-30 MHz 15el LP, 46' boom ...*T	3992.00		3199
7.2/10-30-LPA 7,10-30MHz 8 el, 42' bm ...*T	1325.00		1149
Heavy duty boom only for **7.2/10-30**-LPA .*T	454.00		399.95
7.2/10-30-LPA **w/heavy duty boom** .....*T	1747.00		1499
40M-1 40m rotatable dipole, 46.5' boom .....T	232.00		199.95
40M-2 40m 2 el beam, 16' boom, 4.9 db ...*T	569.00		469.95
40M-3 40m 3 el beam, 32' boom, 6.5 db ...*T	778.00		669.95
Heavy duty boom only for **40M-3** .....*T	336.00		299.95
40M-3 w/heavy duty boom .....*T	1004.00		879.95
40M-4 40m 4 el beam, 42' boom, 7.2 db ...*T	1079.00		879.95
Heavy duty boom only for **40M-4** .....*T	454.00		399.95
40M-4 w/heavy duty boom .....*T	1418.00		1229
40-10V 40/20/15/10m 26.5' vertical	332.00		289.95
10-30-7LPA 10-30MHz 7el LP, 30' bm, 7db *T	1124.00		899.95
Heavy duty boom only for **10-30-7LPA** .....*T	443.00		369.95
10-30-7LPA w/heavy duty boom .....*T	1489.00		1249
SK-8 Conv kit for 10-30 log w/o 40m dipole *T	303.00		269.95
SK-8/40M Conv kit for 10-30 log w/40m dipole .*T	456.00		399.95
KT-31 20-15-10m 24.5' rotatable dipole	282.00		259.95
KT-34A 20-15-10m, 4 el, 16' boom, 7 db	560.00		499.95
KT-34 Upgrade kit - KT-34A to XA	297.00		279.95
KT-34XA 20-15-10m, 6 el, 32' boom, 9 db ...T	804.00		699.95
Heavy duty boom only for **KT-34XA** .....*T	341.00		299.95
KT-34XA w/heavy duty boom .....*T	996.00		869.95
20M-4 20m 4 el beam, 21' boom, 7.7 db ...*T	482.00		399.95

KLM - continued

20M-5 20m 5 el beam, 42' boom, 9.7 db ...*T	746.00		599.95
Heavy duty boom only for **20M-5** .....*T	454.00		399.95
20M-5 w/heavy duty boom .....*T	1113.00		899.95
20M-6 20m 6 el beam, 57' boom, 11 db ...*T	1073.00		879.95
Heavy duty boom only for **20M-6** .....*T	600.00		519.95
20M-6 w/heavy duty boom .....*T	1446.00		1249
20-30-6LPA 20-30MHz, 6el LP, 19'bm, 7db *T	383.00		329.95
17M-3 17m 3el beam, 16.75' boom, 6.5db *T	429.00		349.95
15M-4 15m 4 el beam, 14' boom, 7.7db ...*T	256.00		229.95
15M-6 15m 6 el beam, 36' boom, 10.5db ..*T	603.00		499.95
Heavy duty boom only for **15M-6** .....*T	369.00		319.95
15M-6 w/heavy duty boom .....*T	818.00		709.95
15M-6LD As 15M-6, but light duty .....*T	453.00		379.95
12-17-30D WARC tri-band dipole	282.00		264.95
12-17-30V WARC tri-band vertical	148.00		134.95
10M-4 10m 4 el beam, 10' bm, 7.7 db ....wf†	234.00		149.95
10M-6 10m 6 el beam, 27.5' boom, 11 db Tw†	369.00		239.95
JV-10 10m 26' vertical antenna	119.00		109.95

Note: All KLM antennas supplied with a KLM balun/matching system, which is included in the price.

6M-5 6m 5 el beam, 11.75' boom, 9.7 db	232.00		209.95
6M-7LB 6m 7el beam, 25.75' bm, 11.5db ...T	338.00		299.95
6M-7LD 6m 7 el beam, 20' boom, 10.5 db	267.00		239.95
6M-10 6m 10 el beam, 34' boom, 11.7 db .*T	449.00		389.95
6M-14 6m 14 el beam, 61' boom, 14 db ....*T	623.00		539.95
JV-6 6m 15' vertical antenna, 3 db	126.00		119.95
2M-4X 2m 4 el rear mt beam, 4.2' bm, 8.5db	72.00		69.95
2M-8 2m 8 el beam, 7.25' boom, 10.3 db	113.00		99.95
2M-11X 2m 11 el beam, 15.33' bm, 12.5 db .	97.00		89.95
2M-13LBA 2m 13 el beam, 21.5' bm, 13.3db	110.00		99.95
2M-14C 2m circ 14 el beam, 12.9' bm, 11db	188.00		179.95
2M-16LBX 2m 16el beam, 28'bm, 14.5db Dmwv	214.00		129.95
2M-16LBXM 2m 16 el beam, 28' boom, 14.5db .	225.00		199.95
2M-20LBX 2m 20 el beam, 38.5' boom	260.00		239.95
2M-22C 2m circ 22 el beam, 19' bm, 13 db ..	246.00		229.95
CJ-2M 2m 5' closed J antenna, 1.8db ..Dmwv	39.00		24.95
JV-2 2m 5' vertical antenna, 3 db	129.00		119.95
JV-2X 2m 11' vertical antenna, 5 db	176.00		159.95
220-7 220 7 el beam, 4.75' bm, 8.8 db	87.00		79.95
220-14X 220 14 el beam, 14.5' bm, 13.5db ..	126.00		114.95
220-22LBX 220 22el beam, 29.75'bm, 15.6db .	159.00		144.95
CJ-220 220 40" closed J ant, 1.8 db .....Dmfv	35.00		19.95
JV-220X 220 7' vertical antenna, 5 db .....†	163.00		119.95
432-20LBX 432 20 el beam, 12.33'bm, 15.3db	168.00		154.95
432-30LBX 432 30 el beam, 22'bm, 17.3db ..	197.00		179.95
435-18C 432 circ 18 el beam, 7'bm, 12 db ...	247.00		224.95
435-40CX 432 circ 40 el beam, 14.5'bm, 15.2db .	268.00		244.95
440-6X 440 6 el beam, 2.33' boom, 8.9 db ...	63.00		56.95
440-10X 440 10 el beam, 5.33' bm, 11.2 db .	76.00		69.95
440-16X 440 16 el beam, 10.33'bm, 14.2db .	139.00		126.95
CJ-440 440 19" closed J ant, 1.8 db .....Dv	31.00		24.95
1.2-15LBX 1.2 GHz 15 el beam	105.00		99.95
1.2-24LBX 1.2 GHz 24 el beam	127.00		119.95
1.2-44LBX 1.2GHz 44el beam, 12'bm, 18.2db	177.00		164.95
APS-1 Antenna polarity switcher w/ps	59.00		
CS-2 Extra 432 ant circularity switch	76.00		

FIBERGLASS MASTS

5' 1½" OD fiberglass **mast**	$ 40.00	36.95
7-1/2' 1½" OD fiberglass **mast**	50.00	44.95

COUPLERS/POWER DIVIDERS

440-2N 432 MHz - for 2 ants, w/type N	$ 85.00	79.95
440-4N 432 MHz - for 4 ants, w/type N	95.00	89.95

FERRITE BALUNS

3-60-1:1 3-60 MHz 4kw PEP 1:1 balun	$ 66.00	59.95
3-60-4:1 3-60 MHz 5kw PEP 4:1 balun	95.00	84.95
50-150-1:1 50-150 MHz 500w PEP 1:1 balun .	56.00	52.95

1/4 WAVE SLEEVE BALUNS

2M-50N 2m 1:1 type N balun .....Δm	$ 63.00	19.95

***These antennas are drop-shipped (shipped direct to you from the KLM factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Monroe, Washington via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.**

KANTRONICS (KAN)

	Reg	Sale
DVR 2-2 2w 2m data/voice radio .....Dmv	$219.95	169.95
D4-10 10w 440 MHz data radio	369.95	349.95
Data Engine TNC w/no modems	319.95	299.95
Data Engine w/DE-1200 modem	389.95	369.95
DE-1200 1200 baud modem	89.95	
DE-19K2/9K6 19,200/9600 baud modem ...	109.95	
Host Master II+ IBM software; Data Engine .	69.95	
KPC-2 Packet Communicator II controller/ps	179.95	169.95
KPC-3 Small packet TNC	119.95	
KPC-9612 9600 baud controller/32K mem	229.00	199.95
128K 128K memory upgrade for KPC-9612 .	25.00	
KPC-9612/128K 9600 controller/128K mem ..	249.00	224.95
KAM Plus All Mode Communicator	339.95	CALL
12VDC Adaptor 300ma adapt; KAM Plus/KPC3	9.95	
Host Master 64 Software for C-64/128	69.95	
Host Master II+ IBM software	69.95	
Host Master Mac Macintosh software	69.95	
Pactor Eprom option; KAM (**pre**-version 5) .	79.95	
Pactor Eprom option; KAM (version 5) Dmfv	59.95	
Enhancement board Eprom/board; KAM/v5 ..	89.95	
KPC-4 Dual port VHF packet Communicator ..	319.95	299.95
KPC-2400 Packet unit/Hostmaster II+ ..Dmwf	279.95	139.95
PC Starter Pack Software for IBM .....Dm	25.00	4.95
PC Combo Software for IBM .....Dmfv	49.95	34.95
64/128 Combo Software for C-64/128 Dmv	49.95	34.95
Host Master 64 Software for C-64/128	69.95	
Superfax II WX FAX program for IBM	49.95	
WeFaxWorks WX FAX prog; Mac .....Dm	39.95	29.95
KTU Weathernode remote WX unit/temp sens	329.95	309.95
Anemometer Wind speed sensor	119.95	
Rain gauge	99.95	

KENWOOD (KEN)

TS-950SDX Dlx Xcvr w/keyer/DSP/filters	4799.95	CALL
$100 coupon - TS-950SDX thru 7/20/94		
DRU-2 Digital recording unit	139.95	132.95
IF-232C Level translator	119.95	
MC-43S Extra 8-pin hand mic w/up-down ..	56.95	
MC-60A 8-pin amp desk mic w/up-down ...	149.95	144.95
MC-80 8-pin electret desk mic w/up-down .	104.95	
MC-85 Multi-function 8-pin elect desk mic .	159.95	154.95
MC-90 2-head DSP desk microphone	249.95	229.95
SM-230 Station monitor w/pan display	1149.95	1049
SP-950 External spkr w/audio filters	124.95	
VS-2 Voice synthesizer	69.95	
YG-455CN-1 250 Hz CW filter (2nd IF)	174.95	164.95
YK-88CN-1 270 Hz CW filter (1st IF)	94.95	
YK-88SN-1 1.8 KHz SSB filter (1st IF)	94.95	
TS-850S 9-band Xcvr/.1-30 MHz Rcvr/mic	1949.95	CALL
AT-850 Internal auto antenna tuner	234.95	219.95
TS-850S/AT 9-band Xcvr/.1-30 MHz Rcvr/tuner ...	2149.95	CALL
$50 coupon - TS-850S//TS-850S/AT thru 7/20/94		
AT-300 External auto antenna tuner	669.95	609.95
DRU-2 Digital recording unit	139.95	132.95
DSP-100 External dig sig processor	669.95	609.95
IF-232C Level translator	119.95	
MC-43S Extra 8-pin hand mic w/up-down ..	56.95	
MC-60A 8-pin amp desk mic w/up-down ...	149.95	144.95
MC-80 8-pin electret desk mic w/up-down .	104.95	
MC-85 Multi-function 8-pin elect desk mic .	159.95	154.95
MC-90 2-head DSP desk microphone	249.95	229.95
PG-2X Heavy duty DC cable	32.95	
PS-52 Heavy duty power supply	299.95	279.95
RM-1 Remote control unit	54.95	
SM-230 Station monitor w/pan display	1149.95	1049
SO-2 TCXO unit	179.95	169.95
SP-31 External speaker	99.95	
VS-2 Voice synthesizer	69.95	
YG-455C-1 500 Hz CW filter (2nd IF)	159.95	149.95
YG-455CN-1 250 Hz CW filter (2nd IF)	174.95	164.95
YK-88C-1 500 Hz CW filter (1st IF)	109.95	
YK-88CN-1 270 Hz CW filter (1st IF)	94.95	
YK-88SN-1 1.8 KHz SSB filter (1st IF)	94.95	
TS-450S 9-band Xcvr/SW Rcvr/mic	1439.95	CALL
TS-690S 9-band Xcvr w/6m/SW Rcvr/mic	1739.95	CALL
AT-450 Internal 80-10m auto tuner	234.95	219.95
TS-450S/AT 9-band Xcvr/SW Rcvr/tuner/mic ..	1639.95	CALL
$50 coupon - TS-450S//TS-450S/AT thru 7/20/94		

KENWOOD - continued

	Reg	Sale
AT-50 External auto tuner	354.95	**324.95**
PG-4M 18' extension cable for AT-50	29.95	
AT-300 External auto antenna tuner	669.95	**609.95**
DSP-100 External dig sig processor	669.95	**609.95**
IF-232C Level translator	119.95	
MB-430 Mobile mounting bracket	45.95	
MC-43S Extra 8-pin hand mic w/up-down ..	56.95	
MC-60A 8-pin amp desk mic w/up-down ...	149.95	**144.95**
MC-80 8-pin electret desk mic w/up-down .	104.95	
MC-85 Multi-function 8-pin elect desk mic .	159.95	**154.95**
MC-90 2-head DSP desk microphone	249.95	**229.95**
PG-2X Heavy duty DC cable	32.95	
PS-33 Light duty 20.5A power supply	239.95	**219.95**
PS-53 Heavy duty 22.5A power supply	279.95	**259.95**
SO-2 TCXO unit	179.95	**169.95**
SP-23 External speaker	84.95	
TU-8 CTCSS tone unit	52.95	
VS-2 Voice synthesizer	69.95	
YG-455C-1 500 Hz CW filter (2nd IF)	159.95	**149.95**
YG-455CN-1 250 Hz CW filter (2nd IF)	174.95	**164.95**
YK-88C-1 500 Hz CW filter (1st IF)	109.95	
YK-88CN-1 270 Hz CW filter (1st IF)	94.95	
YK-88S-1 2.4 KHz SSB filter (1st IF)	99.95	
YK-88SN-1 1.8 KHz SSB filter (1st IF)	94.95	
YK-455C-1 500 Hz CW filter	109.95	
TS-50S Compact HF Xcvr/SW Rcvr/mic/mt	1279.95	**CALL**
$50 coupon - TS-50S thru 7/20/94		
TS-60S Compact 6m Xcvr/mic/mt	1209.95	**CALL**
AT-50 External HF auto tuner	354.95	**324.95**
PG-4M 18' extension cable for AT-50	29.95	
AT-300 External HF auto antenna tuner	669.95	**609.95**
IF-10D Computer interface	79.95	
IF-232C Level translator	119.95	
MB-13 Deluxe quick release mtg bracket	47.95	
MC-60A 8-pin amp desk mic w/up-down ...	149.95	**144.95**
MC-80 8-pin electret desk mic w/up-down .	104.95	
MC-85 Multi-function 8-pin elect desk mic .	159.95	**154.95**
PG-2Y DC cable	36.95	
PS-33 Light duty 20.5A power supply	239.95	**219.95**
PS-53 Heavy duty 22.5A power supply	269.95	**249.95**
SO-2 TCXO unit	179.95	**169.95**
YK-107C 500 Hz CW filter	109.95	
TS-140S 9-band Xcvr/.5-30 MHz Rcvr/mic	1109.95	**CALL**
AT-50 External auto tuner	354.95	**324.95**
PG-4M 18' extension cable for AT-50	29.95	
MB-430 Mobile mounting bracket	45.95	
MC-43S Extra 8-pin hand mic w/up-down ..	56.95	
MC-60A 8-pin amp desk mic w/up-down ...	149.95	**144.95**
MC-80 8-pin electret desk mic w/up-down .	104.95	
MC-85 Multi-function 8-pin elect desk mic .	159.95	**154.95**
PG-2X Heavy duty DC cable	32.95	
PS-33 Light duty 20.5A power supply	239.95	**219.95**
SP-23 External speaker	84.95	
TU-8 CTCSS tone unit	52.95	
YG-455C-1 500 Hz CW filter	159.95	**149.95**
YK-455C-1 500 Hz CW filter	109.95	
TL-922A 2kw PEP linear (3-500Zs)	2199.95	**CALL**
DSP-10 Dig signal processor; 950S .....Dm	599.95	**269.95**
YG-455S-1 2.4KHz SSB filter; 950S .....Dmf	152.95	**9.95**
YK-88A AM filter for TS-430S/660/670.....Dmf	77.95	**9.95**
R-5000 100 KHz-30 MHz digital receiver	1209.95	**CALL**
DCK-2 DC cable kit w/cig plug	12.95	
IC-10 IC kit for computer control	42.95	
IF-232C Level translator	119.95	
MB-430 Mobile mounting bracket	45.95	
SP-23 External speaker	84.95	
VC-20 108-174 MHz VHF converter	229.95	**199.95**
VS-1 Voice synthesizer	69.95	
YK-88A-1 AM filter	99.95	
YK-88C 500 Hz CW filter	99.95	
YK-88CN 270 Hz CW filter	99.95	
YK-88S 2.4 KHz SSB filter .....Dm	92.95	**29.95**
YK-88SN 1.8 KHz SSB filter	99.95	
R-2000 150 KHz-30 MHz digital receiver	849.95	**CALL**
DCK-1 DC cable kit; R-2000/1000/600 .Dmwv	10.95	**9.95**
VC-10 118-174 MHz VHF converter ..Dmwfv	210.95	**189.95**
YG-455C 500 Hz CW filter .....Dm	133.95	**99.95**
HS-5 Deluxe headphones	79.95	
HS-6 Lightweight headphones	59.95	

KENWOOD - continued

	Reg	Sale
HW-3 Version 2.3 3½" HamWindows IBM soft	139.95	
HW-3P Ham Windows Plus IBM software	162.95	
LF-30A 1kw PEP low pass filter	57.95	
MA-5 5-band 200w PEP HF mobile antenna ..	174.95	**159.95**
VP-1 Hvy duty chrome spg, bpr mt for MA-5	64.95	
MC-43S 8-pin hand mic w/up-down switch ..	56.95	
MC-55(6P) 6-pin mob up-dwn bm mic/timer Dm	67.95	**19.95**
MC-60A 8-pin amp desk mic w/up-down	149.95	**144.95**
MC-80 8-pin electret desk mic w/up-down	104.95	
MC-85 Multi-function 8-pin electret desk mic	159.95	**154.95**
MJ-46 4-pin mic to 6-pin Xcvr adapt .....Dm	15.95	**9.95**
MJ-64 6-pin mic to 4-pin Xcvr adapt .....Dm	14.95	**2.95**
MJ-68 6-pin mic to 8-pin Xcvr adaptor ....Dm	15.95	**2.95**
MJ-84 8-pin mic to 4-pin Xcvr adaptor ....Dm	18.95	
MJ-86 8-pin mic to 6-pin Xcvr adaptor ....Dm	15.95	**4.95**
PG-4A Adapt cord; MC-60A - 4-pin Xcvr .....Dm	22.95	**12.95**
PG-4B Adapt cord; MC-60A - 6-pin Xcvr .....Dm	21.95	**4.95**
PC-1A 8-pin phone patch	129.95	**124.95**
PG-3B 15A DC line noise filter	29.95	
PG-3G 25A DC line noise filter	49.95	
RCS-1 Radio Construction Set IBM software .	49.95	
SP-41 Compact external speaker	46.95	
SP-50B High quality external mobile speaker	49.95	
SW-2100 1.8-30MHz 2kw SWR/power meter ..	169.95	**159.95**
CD-10 Call sign display; TR-751A .....Dmwfv	119.95	**29.95**
IF-10A Computer interface; TS-711A .....Dm	69.95	**39.95**
PG-2U DC cable; TS-711A .....Dm	13.95	**4.95**
TU-5 Programmable encoder; TS-711A ....Δm	52.95	
TU-7 Prog encoder; TR-751A .....Δmwfv	49.95	
TM-255A 40w 2m SSB/FM Xcvr/9600 baud ...	1109.95	**CALL**
TM-455A 35w 430-440 SSB/FM Xcvr/9600	1279.95	**CALL**
DFK-3 9' separate display cable kit	24.95	
DFK-4 13' remote cable kit	54.95	
DFK-7A Deluxe 22' remote cable kit	89.95	
TSU-8 CTCSS decoder	55.95	
TS-790A 45w 2m/40w 440 SSB/FM Xcvr/mic .	2199.95	**CALL**
IF-232C Level translator	119.95	
MC-43S Extra 8-pin hand mic w/up-down ..	56.95	
MC-60A 8-pin amp desk mic w/up-down ...	149.95	**144.95**
MC-80 8-pin electret desk mic w/up-down .	104.95	
MC-85 Multi-function 8-pin elect desk mic .	159.95	**154.95**
PG-2X Heavy duty DC cable	32.95	
PS-31 Power supply	219.95	**CALL**
SP-31 External speaker	99.95	
TSU-5 Programmable CTCSS decoder	63.95	
UT-10 10w 1.2 GHz module	629.95	**569.95**
VS-2 Voice synthesizer	69.95	
TM-642A 2m/220 FM Xcvr w/TTP	929.95	**CALL**
TM-742A 50/35w 2m/440 FM Xcvr w/TTP	929.95	**CALL**
TM-942A 50/35/10w 2m/440/1.2 FM/TTP	1309.95	**CALL**
$40 coupon - TM-642A/TM-742A/TM-942A thru 7/20/94		
DFK-3 9' separate display cable kit	24.95	
DFK-4 13' remote cable kit	54.95	
DFK-7 Deluxe 22' remote cable kit	84.95	
MJ-88 Modular to 8-pin mic adapter	29.95	
MJ-89 Modular mic switch	67.95	
PG-4L 23' remote cable kit .....Dmwf	84.95	**69.95**
TSU-7 CTCSS decoder unit	58.95	
UT-28S 50w 10m unit	339.95	**309.95**
UT-50S 50w 6m unit	359.95	**329.95**
UT-220S 25w 220 MHz unit	359.95	**329.95**
UT-1200 10w 1.2 GHz unit	459.95	**419.95**
TM-732A 50/35w 2m/440 FM Xcvr w/TTP ..D*	769.95	**559.95**
DFK-4 13' remote cable kit	54.95	
DFK-7 Deluxe 22' remote cable kit	84.95	
MJ-88 Modular to 8-pin mic adapter	29.95	
TSU-7 CTCSS decoder unit	58.95	
TM-733A 50/35w 2m/440 FM Xcvr w/TTP	749.95	**CALL**
$20 coupon - TM-733A thru 7/20/94		
DFK-3B 9' separate display cable kit	37.95	
DFK-4B 13' remote cable kit	59.95	
DFK-7B Deluxe 22' remote cable kit	99.95	
TSU-8 CTCSS decoder	55.95	
MA-700 3db 2m/5.5db 440 ant w/duplexer	99.95	
Larsen **PO-K** Roof mt, coax; MA-700	23.00	
Larsen **PO-MM** Magnet mt, coax; MA-700 ...	30.40	
Larsen **PO-TLM** Trunk lip mt, coax; MA-700	26.35	

KENWOOD - continued

	Reg	Sale
TM-241A 50w 2m FM Xcvr w/TTP mic	459.95	**CALL**
$30 coupon - TM-241A thru 7/20/94		
TM-331A 25w 220 FM Xcvr w/TTP mic	529.95	**CALL**
TM-441A 35w 440 FM Xcvr w/TTP mic	529.95	**CALL**
TM-541A 10w 1.2GHz FM Xcvr w/TTP mic	649.95	**CALL**
DRU-1 Digital recorder .....Dmwfv	125.95	**119.95**
IF-20 Interface for 4 Xcvrs .....Dm	139.95	**59.95**
PG-4J Extension cable kit .....Dm	47.95	**19.95**
KQT-8/TSU-6 Prog CTCSS decoder	46.95	
PG-4G Extra control cable .....Dm	22.95	**9.95**
TM-251A 50w 2m FM Xcvr/TTP/9600 baud	529.95	**CALL**
TM-451A 35w 440 FM Xcvr/TTP/9600 baud ...		**CALL**
ME-1 Memory expansion	36.95	
TSU-8 CTCSS decoder	55.95	
MC-48B Up-down 8-pin TTP microphone	83.95	

Accessories: TH-A/B/2600A/3600A/2500/3500

DC-21 DC adapter for TH-A/B .....Dmf	$ 33.95	**6.95**
DC-26 DC adapter; TR-2600A/3600A .....Dmf	37.95	**19.95**
PB-21 Extra 180ma battery for TH-A/B	29.95	
PB-21H* 500ma battery for TH-A/B	49.95	
*BC-2 or 6 required to charge PB-21H		
PB-25 Extra 400ma batt; 2500/3500	64.95	
RA-9B 220 BNC stubby duck .....Dm	18.95	**2.95**
PB-24 Nicad batt w/cgr adapt; 2400	54.95	

Accessories for TH-225A/315A/415A/205AT

BC-7 Desk rapid cgr for PB-1/2/3/4/12 Dmwf	$114.95	**49.95**
KNB-4/PB-4 1600ma 7.2v (1.5w) battery	76.95	
KSC-6/BC-8 Desk cgr for PB-1/2/3/4/12	27.50	
PB-3 800ma 7.2v battery .....Dmwfv	62.95	**19.95**
RA-3 2m BNC ⅜ wave telescopic ant .....Dm	20.95	**16.95**
RA-5 2m ¼ wv/440 ⅝ wv BNC tele ant ..Dmwf	26.95	
SC-27 Soft case for PB-12; 225A .....Dmw	19.50	**2.95**
TSU-3 Encoder/decoder for TH-205AT .....Dm	46.95	**9.95**
TSU-4 Decoder; TH-225A/315A/415A ..Δmwfv	46.95	

Accessories for TH-75A/77A/25AT/26AT

BC-2 Wall charger for PB-10 .....Dmwfv	$ 22.95	**2.95**
BT-6 6-AA battery case .....Dmwf	26.95	
DC-1 DC adapter .....Dmf	26.95	**2.95**
PG-2V DC cable for DC-1 .....Dmfv	14.95	**9.95**
PG-3E Cig cord w/filter for DC-1	34.95	
DC-4 Mobile charger for PB-10 .....Dmwf	20.95	**2.95**
KNB-5A 800ma 7.2v battery	58.95	
KNB-6A 1600ma 7.2v (2.5/2w) battery	97.50	
KNB-7A 800ma 12v (5w) batt (not 55AT)	76.95	
KQT-8/TSU-6 CTCSS encoder/decoder	46.95	
KSC-8/BC-10 Compact charger	38.95	
KSC-12/KSC-7/BC-11 Rapid charger	99.95	
KVC-1/DC-5 Mobile cgr for PB-6/7/9	33.95	
KWR-1/WR-1 Water resistant bag	22.00	
PB-5 200ma 7.2v (2.5/2w) battery .....Dmwfv	59.95	**9.95**
SC-14 Soft case for PB-5; 25/45AT .....Dm	25.95	**2.95**
SC-17 Soft case for PB-5 w/55AT .....Dm	22.95	**2.95**
SC-18 Soft case for PB-6/BT-6 w/55AT ....Dm	22.95	**2.95**
SC-19 Soft case for PB-7/8 w/55AT .....Dm	22.95	**2.95**
SC-22 Soft case for PB-6 w/75A .....Dm	29.95	**2.95**
SC-28 Soft case; PB-5/6/10/BT-6/77A .....Dm	19.95	**12.95**
SC-29 Soft case for PB-7/8/9 w/77A .....Dm	19.95	**12.95**
VB-50 1/10w 1.2 GHz FM amplifier .....Dm	380.95	**199.95**

Accessories for TH-26AT/46AT

SC-24 Soft case for PB-5/BT-7 .....Dm	$ 22.95	**9.95**
SC-26 Soft case for PB-7/8/9 .....Dm	22.95	**2.95**
TH-47A 1.5w 440 FM HT/batt/cgr/TTP ..Dmwv	429.95	**249.95**

Accessories for TH-27A/47A

BC-14 Extra wall charger for PB-13	$ 24.95	
SC-32 Soft case for PB-14 .....Dm	21.95	**12.95**
TH-28A 2.5w 2m FM HT/batt/cgr/TTP	399.95	**CALL**
TH-48A 2w 440 FM HT/batt/cgr/TTP	459.95	**CALL**
TH-78A 2.5/2w 2m/440 FM HT/batt/cgr/TTP ..	599.95	**CALL**
$30 coupon - TH-78A thru 7/20/94		

Accessories for TH-28A/48A/78A

BC-15A Rapid charger for PB-13/14/17/18 ...	$114.95	
BH-6 Swivel mount	39.95	
BT-8 AA alkaline battery case	26.95	
EMC-1 Lapel clip mic/ear piece	41.95	
HB-2 Wrist strap	16.95	
HMC-2 VOX/boom mic headset	66.95	
KLF-3/PG-3F Cig cord w/filter	23.50	

KENWOOD - continued

Item	Description	Reg	Sale
ME-1	Memory expansion	36.95	
PB-13	700ma 7.2v battery	63.95	
PB-14	300ma 12v (5w) battery	89.95	
PB-17	700ma 12v (5w) battery	99.95	
PB-18	1100ma 7.2v battery	86.95	
PG-2W	DC cable w/fuse	15.95	
PG-3H	Cig lighter cord w/filter	31.95	
SC-33	Small soft case; 28A/48A	20.95	
SC-34	Large soft case; 28A/48A	21.95	
SC-35	Regular soft case; 78A	19.95	
SC-36	Large soft case; 78A	21.95	
SMC-31	Speaker/mic w/right angle plug	59.95	
SMC-32	Mini water resistant rt angle spkr/mic	46.95	
SMC-33	Speaker/mic w/remote control	59.95	
SMC-34	Spkr/mic w/vol cont & function keys	62.95	
WR-2	Water resistant bag	29.95	
TH-22AT	3w 2m FM HT/batt/cgr/TTP	349.95	CALL
TH-42AT	2.5w 440 FM HT/batt/cgr/TTP	389.95	CALL

$20 coupon - TH-22AT/TH-42AT thru 7/20/94

Item	Description	Reg	Sale
BH-6	Swivel mount	39.95	
BT-9	4-AA battery holder	26.95	
EMC-1	Lapel clip mic/ear piece	41.95	
HB-2	Wrist strap	16.95	
HMC-2	VOX/boom mic headset	66.95	
KSC-14	2-pack rapid charger	84.95	
PB-32	600ma 6v battery	64.95	
PB-33	1200ma 6v battery	89.95	
PB-34	600ma 9.6v (5w) battery	89.95	
PG-2W	DC cable w/fuse	15.95	
PG-3H	Cig lighter cord w/filter	31.95	
SC-37	Soft case for PB-30/32	21.95	
SC-39	Soft case for PB-33/34	21.95	
SMC-31	Speaker/mic w/right angle plug	59.95	
SMC-32	Mini water resist rt angle spkr/mic	46.95	
SMC-33	Speaker/mic w/remote control	59.95	
SMC-34	Spkr/mic w/vol cont/function keys	62.95	
TSU-8	CTCSS decoder	55.95	
WR-2	Water resistant bag	29.95	

LARSEN (LAR)

27-31 MHz ANTENNAS

Item	Description	Reg	Sale
NLA-27	10m ant only (no mount) ....Dmwfv	$ 38.90	35^{95}
NLA-27-K	10m ⅜" snap mt ant ....Dmwfv	51.40	46^{95}
NMO-27	10m ant only (no mount)	32.25	29^{95}
NMO-27-K	10m ¾" hole mt ant	45.25	40^{95}

47-54 MHz ANTENNAS

Item	Description	Reg	Sale
NLA-50	6m ant only (no mount) ....Dmwfv	$ 38.90	35^{95}
NLA-50-K	6m ⅜" snap mt ant ....Dmwfv	51.40	46^{95}
NMO-50	6m ant only (no mount)	32.25	29^{95}

144-174 MHz ANTENNAS

Item	Description	Reg	Sale
NLA-150	2m ant only (no mt), 3 db ....Δmwfv	$ 38.00	32^{95}
NLA-150-K	2m ⅜" snap mt ant, 3 db ..Δmwfv	50.50	43^{95}
NLA-150-MM	2m mag mt ant, 3 db ....Δmwfv	68.40	58^{95}
NLA-150-TLM	2m tnk lid mt ant, 3 db Δmwfv	64.40	53^{95}
NLA-150-TMB	2m tnk gtr mt ant, 3 db .Δmwf	58.35	48^{95}
NMO-150	2m ant only (no mount), 3 db	29.40	26^{95}
NMO-150B	2m black ant only (no mt), 3 db	31.85	28^{95}
NMO-150-K	2m ¾" hole mt ant, 3 db	42.40	38^{95}
NMO-150-MM	2m magnetic mt ant, 3 db	58.15	52^{95}
NMO-150-TLM	2m trunk lid mt ant, 3 db	53.00	48^{95}
OM-150-K	2m no gnd plane ant, 2 db .Δmwv	45.85	29^{95}

220-265 MHz ANTENNAS

Item	Description	Reg	Sale
NLA-220	220 ant only (no mt), 3 db ....Dmwfv	$ 36.35	32^{95}
NLA-220-K	220 ⅜" snap mt ant, 3 db .Dmwfv	48.85	43^{95}
NLA-220-MM	220 mag mt ant, 3 db ...Dmwfv	66.75	58^{95}
NLA-220-TLM	220 tnk mt ant, 3 db ....Dmwfv	62.75	53^{95}
NLA-220-TMB	220 tnk gtr mt ant, 3 db Dmwf	56.70	48^{95}
NMO-220	220 ant only (no mount), 3 db	31.10	27^{95}
NMO-220-K	220 ¾" hole mt ant, 3 db	44.10	39^{95}
NMO-220-MM	220 magnetic mt ant, 3 db	59.85	53^{95}
NMO-220-TLM	220 trunk lid mt ant, 3 db	54.70	49^{95}
OM-220-K	220 no gnd plane ant, 2 db Δmwv	47.50	29^{95}

440-460 MHz ANTENNAS

Item	Description	Reg	Sale
NLA-440	440 ant only (no mt), 5 db ....Dmwfv	$ 34.85	31^{95}
NLA-440-K	440 ⅜" snap mt ant, 5 db .Dmwfv	47.35	42^{95}
NLA-440-MM	440 mag mt ant, 5 db ...Dmwfv	65.25	57^{95}
NLA-440-TLM	440 tnk mt ant, 5 db ....Dmwfv	61.25	52^{95}

LARSEN - continued

Item	Description	Reg	Sale
NLA-440-TMB	440 tnk gtr mt ant, 5 db Dmwf	55.20	46^{95}
NMO-440	440 ant only (no mount), 5 db	28.15	25^{95}
NMO-440B	440 black ant only (no mt), 5 db	34.35	31^{95}
NMO-440-K	440 ¾" hole mt ant, 5 db	41.15	37^{95}
NMO-440-MM	440 magnetic mt ant, 5 db	56.90	51^{95}
NMO-440-TLM	440 trunk lid mt ant, 5 db	51.75	46^{95}
OM-440-K	440 no gnd plane ant, 2 db ...Dmv	52.15	29^{95}
NLA-2/70	2m/440 ant (no mt), 2/4db ..Δmwfv	51.15	43^{95}
NLA-2/70-K	2m/440 ⅜" snap, 2/4db ..Δmwfv	63.65	54^{95}
NLA-2/70-MM	2m/440 mag, 2/4 db ...Δmwfv	81.55	68^{95}
NLA-2/70-TLM	2m/440 tnk mt, 2/4db Δmwfv	77.55	63^{95}
NMO-2/70	2m/440 2-band ant (no mt), 2/4db	46.65	41^{95}
NMO-2/70-K	2m/440 ¾" hole mt ant, 2/4db	59.65	53^{95}
NMO-2/70-MM	2m/440 mag mt ant, 2/4 db	75.40	67^{95}
NMO-2/70-TLM	2m/440 tnk lid mt ant, 2/4db	70.25	63^{95}
PO-2/70	2m/440 2-band ant (no mt) ....Δmw	50.85	39^{95}
NLAQ	136-512 MHz ¼ wv ant (no mt) .Δmwfv	14.40	
NLAQ-K	136-512 ¼ wv ⅜" snap mt ant Dmwfv	23.25	
NMOQ-Spec	136-512 MHz ¼ wave ant (no mt)	9.35	
NMOQ-Spec-B	136-512 black ¼ wv ant (no mt)	12.60	
NMOQ-Spec-K	136-512MHz ¼ wv ¾" hole ant	22.35	
NMO-1290	1.2 GHz ant only (no mt) ....Dmv	30.85	24^{95}
BSA-150-K	2m base/BSA-K/NLA-150 .Δmwfv	74.15	59^{95}
BSA-220-K	220 base/BSA-K/NLA-220 .Dmwfv	72.50	59^{95}
BSA-440-K	440 base/BSA-K/NLA-440 Δmwfv	74.15	59^{95}
FB1-136	Base station 136-230 MHz ant	132.50	119^{95}

ON GLASS ANTENNAS

Item	Description	Reg	Sale
KG-144-PL	2m 3 db on glass antenna Dmwfv	$ 61.35	55^{95}
KG-144-UD-PL	2m 3 db on glass antenna	64.65	58^{95}
KG-220-PL	220 3 db on glass ant ......Dmwfv	61.35	55^{95}
KG-220-UD-PL	220 3 db on glass antenna	64.65	58^{95}
KG-440-N	440 2.4 db N on glass ant ..Dmwfv	54.15	48^{95}
KG-440-PL	440 2.4 db on glass ant ...Dmwfv	49.15	44^{95}
KG-440-UD-PL	440 2.4 db on glass antenna	52.50	47^{95}
KG-2/70-PL	2m/440 2.5/4.5db on glass Dmwfv	88.35	74^{95}
KG-2/70-UD-PL	2m/440 2.5/4.5db on glass	88.35	79^{95}
KG-Reinstall	Reinstall kit for KG-ants	5.00	

KULDUCKIES - For Hand-helds

Item	Description	Reg	Sale
KD4-146	2m BNC Kulduckie	$ 16.65	
KD4-2/70	2m/440 BNC Kulduckie	26.65	
KD4-222	220 BNC Kulduckie	16.65	
KD1-445	440 5/16-32 thread Kulduckie ....Δmv	13.15	2^{95}
KD4-445	440 short BNC Kulduckie	16.65	
KD14-445	440 ¼ wave BNC Kulduckie	16.65	
KD4-146-HQ	2m part helical, part ¼ wave BNC	20.65	
KD14-2M-HW	2m ½ wave BNC antenna	32.50	
KD14-440-HW	440 ½ wave BNC antenna	32.50	

ACCESSORIES & REPLACEMENT PARTS

Item	Description	Reg	Sale
AD-2/70	100w 2m/440 duplexer	$ 66.60	59^{95}
BSA-K	Base station mounting kit ....Δmwfv	44.90	39^{95}
CRK	NLA contact replacement kit ....Δmwfv	1.90	
NLA-150-CO	Extra coil for NLA-150 ....Δmw	28.85	
NLA-220-CO	Extra coil for NLA-220 ....Dmw	27.15	
NLA-B	⅜" snap mt only for NLA ant ....Δmwfv	4.25	
NLA-CAP	Rain cap for NLA mount ......Δmwfv	3.25	
NLA-K	⅜" snap mt kit w/coax; NLA ant Δmwfv	12.50	
NLA-MM	Magnet mt, coax for NLA ant Δmwfv	30.40	
NLA-TLM	Tnk lip mt, coax for NLA ant Δmwfv	26.40	
NMO-150-CO	Extra coil for NMO-150	20.25	
NMO-150-BCO	Extra black coil; NMO-150B	20.25	
NMO-220-CO	Extra coil for NMO-220	21.90	
NMO-CAP	Rain cap for NMO mount	3.25	
NMO-CAP-B	Black rain cap for NMO mount	3.25	
NMO-K	¾" hole mt w/coax for NMO ant	13.00	
NMO-MM	Magnet mt, coax for NMO ant	28.75	
NMO-TLM	Trunk lip mt, coax for NMO ant	23.60	
PO-K	Roof mt, coax for SO-239 ant	23.00	
PO-MM	Magnet mt, coax for SO-239 ant	30.40	
PO-TLM	Trunk lip mt, coax for SO-239 ant	26.35	
RG-NLA	Extra NLA rubber gaskets (3) Δmwfv	2.10	
RG-NMO	Extra NMO rubber gaskets (3)	2.10	
SPRING	Shock spring	6.60	
TMB-34	Trunk mtg bkt for NMO antenna	4.50	
TMB-34B	Black trunk mtg bkt for NMO ant	6.50	
TMB-38	Trunk mtg bkt for NLA ant ....Δmwf	4.50	

LARSEN - continued

Item	Description	Reg	Sale
TMB-38B	Black trunk mtg bkt for NLA ....Δmf	6.50	
TMB-OM	Trunk gutter bkt for OM antenna Δm	6.35	
W-154	Extra closed coil whip for 440 ant	17.20	
W-490	49" whip	9.20	
W-490B	Black 49" whip	11.60	

MFJ ANTENNA TUNERS (MFJ)

Item	Description	Reg	Sale
989C	Dlx 3kw PEP w/roller inductor	$349.95	309^{95}
986	3kw PEP w/roller inductor	289.95	259^{95}
962C	1.5kw PEP/meter/switch/balun	229.95	209^{95}
949E	300w/meter/dummy/sw/balun	149.95	134^{95}
948	300w/meter/switch/balun	129.95	119^{95}
941E	300w w/meter, switch, balun	109.95	99^{95}
945D	300w tuner w/meter	89.95	84^{95}
20	Mobile bracket for 945D	4.95	
934	300w tuner w/artificial ground	169.95	159^{95}
901B	Versa Tuner 200w ant tuner	59.95	
16010	200w random wire tuner	39.95	
910	80-10m mobile antenna matcher	19.95	
921	2m/220 300w PEP tuner/SWR/wattmeter	69.95	
924	440 MHz 300w PEP tuner/SWR/wattmeter	69.95	

MEMORY KEYERS

Item	Description	Reg	Sale
451	Dedicated CW keyboard w/memory	$ 99.95	94^{95}
451X	Morse keyboard interface only	79.95	
77	Wired remote control for 486 ....Δm	19.95	14^{95}
484C	12 25-char/25-100 char msgs ...Dmwfv	149.95	89^{95}
75	Remote pad for 484C ....Dmv	14.95	12^{95}
490	492 keyer/Bencher paddle combination	164.95	149^{95}
490X	492 keyer for use w/Bencher or 564	109.95	99^{95}
564	Deluxe iambic paddle for 490X	49.95	
492	192 char menu driven memory keyer	99.95	89^{95}
80	8000 char memory expansion for 492	14.95	
492X	Memory keyer w/8000 char expansion	114.95	104^{95}
78	Remote control for 492/492X	19.95	
493	32,000 char menu driven mem keyer	139.95	129^{95}
79	Remote control for 493	19.95	
551	IBM AT-101 keyboard for 493	39.95	
5409	493 9-pin serial port 6' cable	12.95	
5425	493 25-pin serial port 6' cable	12.95	

ELECTRONIC KEYERS

Item	Description	Reg	Sale
407C	Deluxe electronic keyer	$ 69.95	64^{95}
401B	Econo keyer	49.95	
1305	5vdc power supply	12.95	

KEYER/PADDLES

Item	Description	Reg	Sale
422B	Keyer/Bencher paddle combination	$134.95	124^{95}
422BX	Keyer only	79.95	74^{95}
1305	5vdc power supply	12.95	
564	Deluxe iambic paddle for 422BX	49.95	

COMPUTER INTERFACES

Item	Description	Reg	Sale
1224	Interface	$ 99.95	94^{95}
1264	Tape software for VIC/C64; 1224	19.95	
1265	Disk software for VIC/C64; 1224	19.95	
1285	Software for IBM; 1224	19.95	
1225	Receive only interface	69.95	64^{95}
1264B	Tape software for VIC/C64; 1225	19.95	
1265B	Disk software for VIC/C64; 1225	19.95	
1285B	Software for IBM; 1225	19.95	
1270C	Packet radio TNC2	119.95	109^{95}
47A	Mailbox 32K mem board; 1270/1274	49.95	
47B	Mailbox 128K mem board; 1270/1274	69.95	
47C	Mailbox 512K mem board; 1270/1274	239.95	219^{95}
2400	2400 baud modem	89.95	
9600	9600 baud modem	109.95	104^{95}
1270CT	Turbo packet w/2400 baud	209.95	189^{95}
1270CQ	Packet w/9600 baud modem	229.95	209^{95}
1274C	Packet radio controller ....Dmfv	139.95	129^{95}
2400	2400 baud modem	89.95	
9600	9600 baud modem	109.95	104^{95}
1274T	Turbo controller w/2400 baud ......Dmv	229.95	169^{95}
1274CT	Turbo controller w/2400 baud ......Dm	229.95	199^{95}
1278B	Multi-mode controller w/Pactor	299.95	269^{95}
45A	32K RAM IC only	14.95	
45B	128K RAM IC only	34.95	
45C	512K RAM IC only	219.95	199^{95}
48	1278 upgrade	24.95	
48B	1278B upgrade	24.95	
48E	1278 packet encryption EPROM	29.95	
48X	1278 expanded mailbox firmware	24.95	

MFJ - continued

	Reg	Sale
52 TNC2 deviation meter board	29.95	
56A Pactor/mailbox 32K board for 1278B	69.95	
56B Pactor/mailbox 128K board for 1278B	89.95	
56C Pactor/mailbox 512K board; 1278B	239.95	219^{95}
2400 2400 baud modem	89.95	
9600 9600 baud modem	109.95	104^{95}
1278T Turbo controller/2400 baud ....Dm	359.95	269^{95}
1278BT Turbo controller/2400 baud/Pactor	369.95	339^{95}
1282 C64 starter pack	24.95	
1282B Multicom package; C64/128	39.95	
1282BD Multicom 64 disk only	29.95	
1283 Tape software; C64 & VIC-20	24.95	
1284 5¼" IBM starter pack	24.95	
1284D 1284 disk only	14.95	
1284M 3½" IBM starter pack	24.95	
1284MD 1284M disk only	14.95	
1287 Macintosh starter pack	24.95	
1287B Mac multicom starter pack	49.95	
1287D 1287 disk only	14.95	
1287BD 1287B disk only	39.95	
1289 5¼" multicom software for IBM	59.95	
1289D 1289 disks only	49.95	
1289M 3½" multicom software for IBM	59.95	
1289MD 1289M disks only	49.95	
49 1289 color SSTV/print upgrade .....Δm	19.95	14^{95}
1290 Amiga multicom starter pack	49.95	
1290D 1290 disk only	39.95	
1214PC Multimode interface for IBM	149.95	139^{95}
59 1214 5¼" software upgrade	29.95	
59M 1214 3½" software upgrade	29.95	
40B TNC2 upgrade 32K/RAM	39.95	
40C TNC2 upgrade 32K	19.95	
40CX TNC2 upgrade; expanded RAM mailbox	19.95	
40E TNC2 packet encryption EPROM	29.95	
43 Real time clock for TNC	29.95	
44 Plug-in scope tuning adapter	29.95	
1271 Packet card for C64/128	49.95	
1272B TNC to microphone interface	34.95	
1272BX TNC/mic switch; PK-232	39.95	
1272BYH TNC/mic switch; KAM HF	39.95	
1272BYV TNC/mic switch; KAM VHF	39.95	
1272BZ TNC/mic switch; PK-88	39.95	
1272M TNC/mic RJ-45 switch; MFJ/PK-900	34.95	
1272MX TNC/mic RJ-45 switch; PK-232	39.95	
1272MYH TNC/mic RJ-45 switch; KAM HF	39.95	
1272MYV TNC/mic RJ-45 sw; KAM VHF; KPC3	39.95	
1272MZ TNC/mic RJ-45 switch; PK-88	39.95	
1273 Packet tuning indicator ....Dmwfv	49.95	39^{95}

SSB/CW FILTERS

	Reg	Sale
752C Dual tunable SSB/CW filter	$ 99.95	94^{95}
722 SSB/CW notch filter	79.95	74^{95}

PHONE PATCH

	Reg	Sale
624D Phone patch w/audio VU meter	$ 89.95	84^{95}

DUMMY LOADS

	Reg	Sale
250 2kw PEP dummy load w/oil	$ 49.95	
250X 2kw PEP dummy load, less oil	29.95	
260B 300w 0-150 MHz dry dummy load	29.95	
260BN 300w 0-150 MHz type N dry dummy	34.95	
264 1.5kw 0-650 MHz dry dummy load	59.95	

MFJ - continued

	Reg	Sale
264N 1.5kw 0-650 MHz type N dry dummy	69.95	

SWR/WATTMETERS

	Reg	Sale
812B 14-170 MHz SWR/FS/wattmeter	$ 29.95	
815B 160-6m cross-needle SWR/wattmeter	69.95	
816 1.8-30 MHz toroidal SWR/wattmeter	29.95	
817 2m/440 cross needle meter	79.95	74^{95}
840 2m 5w wattmeter/dummy load for HT	19.95	
841 2m 5w in-line HT wattmeter/SWR	39.95	

SHORTWAVE ACCESSORIES

	Reg	Sale
956 LW/MW/SW preselector/tuner	$ 39.95	
959B Receiver ant tuner w/preamp	89.95	
1020A .3-30 MHz indoor active rcv ant	79.95	
1022 300KHz-200MHz active rcv antenna	39.95	
1024 .05-30 MHz outdoor active rcv ant	129.95	119^{95}
1040B Deluxe receiver preselector	99.95	
1045B Receiver preselector	69.95	

ACCESSORIES

	Reg	Sale
1305 5vdc 300ma adapter	$ 12.95	
1312 12vdc 300ma adapter, 2.5mm plug	12.95	
1312B 12vdc 300ma adapter, 2.1mm plug	12.95	
1315 12vdc 500ma adapter	14.95	
30 Golden Classics book	9.95	
31 Oscar book	7.95	
32 Packet Made Easy book	9.95	
33 Mobile Handbook book	12.95	
35 World of Ham Radio book	7.95	
36 Shortwave Listeners Guide; Apts/Condos	9.95	
37 Ham Communications Circuit Files book	9.95	
38 Easy-up Antennas book	16.95	
105B 24-hour quartz wall clock	19.95	
107B 24-hour digital clock	9.95	
108B 24/12-hour dual disp digital clock	19.95	
112 Deluxe world map clock	24.95	
202B RF noise bridge	59.95	
203 160-10m bandswitched dip meter	99.95	89^{95}
204B Antenna bridge	79.95	74^{95}
205 160-10m antenna resistance meter	89.95	84^{95}
206 Antenna current probe	79.95	74^{95}
207 160-10m SWR analyzer	79.95	74^{95}
208 2m SWR analyzer	79.95	74^{95}
209 1.8-170 MHz SWR analyzer	109.95	99^{95}
217 SWR analyzer, 30-50 MHz	79.95	74^{95}
218 SWR analyzer, 150-170 MHz	79.95	74^{95}
219 SWR analyzer, 440 MHz	99.95	89^{95}
249 1.8-170 MHz SWR analyzer/LCD counter	199.95	179^{95}
259 1.8-170 MHz SWR analyzer/RF res meter	219.95	199^{95}
29 Padded carrying pouch; 209/249/259	19.95	
66 1.8-30/30-170 MHz dip coils; 249/259	19.95	
280 Mobile compact speaker	19.95	
283 Speaker/mic, split jack; Alinco	24.95	
284 Speaker/mic; Icom/Yaesu/Alinco	24.95	
285 Mini spkr/mic; Icom/Yaesu/Alinco	24.95	
285L Mini spkr/mic L for Icom/Yaesu/Alinco	24.95	
285W Mini spkr/mic for Icom W2A	24.95	
286 Speaker mic; Kenwood	24.95	
287 Mini spkr/mic; Kenwood	24.95	
287L Mini spkr/mic L for Kenwood	24.95	
346 600 MHz LCD frequency counter	189.95	179^{95}

MFJ - continued

	Reg	Sale
411 Personal Morse Code Tutor	79.95	74^{95}
432 Voice Memory Keyer	99.95	94^{95}
462 RTTY/ASCII/CW/AMTOR Rcvr multi-reader	149.95	139^{95}
557 Deluxe code oscillator w/key	24.95	
701 Toroid RFI filters ....pack of 4	14.95	
704 1kw low-pass filter	39.95	
850 AC line voltage monitor	19.95	
912 W9INN remote balun	39.95	
931 Artificial ground unit	79.95	74^{95}
1112 Multiple DC outlet	29.95	
1116 Dlx multiple DC outlet	44.95	
1118 High current multiple DC outlet	64.95	
1202 Contest Connie voice keyer/interface	149.95	139^{95}
1266 C64 disk code tutor program	19.95	
1267 C64 cart code tutor program ....Dv	29.95	14^{95}
76 1266/67 interface board; kyr/keyboard	19.95	
1268 IBM PC memory keyer	49.95	
1269 IBM code tutor	19.95	
1281 IBM Easy-DX logging program	39.95	
1286 Gray Line DX Advantage prog for IBM	29.95	
1288 Picture passing packet soft; IBM ....Dm	9.95	4^{95}
1292 Video digitizer for IBM	199.95	189^{95}
1610 Novice theory tutor software for IBM	29.95	
1611 Technician theory tutor software; IBM	29.95	
1612 General theory tutor software for IBM	29.95	
1613 Advanced theory tutor software; IBM	29.95	
1614 Extra theory tutor software for IBM	29.95	
1615 No-code theory tutor software for IBM	49.95	
1621 40-10m 54" portable ant w/tuner	79.95	74^{95}
1630 Novice theory tutor software for Mac	29.95	
1631 Technician theory tutor software; Mac	29.95	
1632 General theory tutor software for Mac	29.95	
1633 Advanced theory tutor software; Mac	29.95	
1634 Extra theory tutor software for Mac	29.95	
1635 No-code theory tutor software for Mac	49.95	
1680I Windows software package; Icom	109.95	
1680K Windows software package; Kenwood	109.95	
1680Y Windows software package; Yaesu	109.95	
1681 Log Windows software	69.95	
1682 Packet Windows software	29.95	
1683I Rig Windows software for Icom	29.95	
1683K Rig Windows software for Kenwood	29.95	
1683Y Rig Windows software for Yaesu	29.95	
5383I Icom Xcvr interface cable	49.95	
5383K Kenwood Xcvr interface cable	49.95	
5383Y Yaesu Xcvr interface cable	49.95	
1700B Combination ant/xmtr switch	64.95	
1701 6-position coax switch	34.95	
1702B 2-position coax switch	21.95	
1702BN 2-pos 1.1 GHz type N switch	31.95	
1704 4-pos 500 MHz switch/lightning protect	59.95	
1704N 4-position type N switch	69.95	
1710 2m ⅜ wave telescopic antenna	9.95	
1712 2m/440 telescopic antenna	14.95	
1714 2m ½ wave telescopic antenna	16.95	
1718 2m shorty duck for HT	12.95	
1724B 2m/440 magnet mt antenna	14.95	
1728 2m ⅝ wave magnet mt antenna	24.95	
1728B 2m ⅝ wave mag mt ant w/BNC	24.95	

Toll Free: **1-800-558-0411** • *Fax:* **(414) 358-3337** • *BBS:* **(414) 358-3472**

AMATEUR ELECTRONIC SUPPLY® Inc.

AES® Store Locations	Phone	Toll Free	FAX
Milwaukee, WI 53223; 5710 W. Good Hope Road	(414) 358-0333	1-800-558-0411	(414) 358-3337
Wickliffe, OH 44092; 28940 Euclid Avenue	(216) 585-7388	1-800-321-3594	(216) 585-1024
Orlando, FL 32803; 621 Commonwealth Avenue	(407) 894-3238	1-800-327-1917	(407) 894-7553
Clearwater, FL 34625; 1898 Drew Street	(813) 461-4267		(813) 443-7893
Las Vegas, NV 89106; 1072 N. Rancho Drive	(702) 647-3114	1-800-634-6227	(702) 647-3412

MFJ - continued

		Reg	Sale
1730	2m pocket roll-up vertical ant	14.95	
1740	2m ¼ wave ground plane ant	12.95	
1750	2m ⅝ wave ground plane ant	19.95	
1752	220 ⅝ wave ground plane ant	19.95	
1754	2m/440 ground plane antenna	24.95	
1763	2m 3el portable beam	39.95	
1764	2 & 6m dual ⅝ super gain base ant	34.95	
1765	Direct feed power splitter/cbl harness	29.95	
1766	Stacked 2m dual ⅝ base antenna	89.95	
1780	14-30 MHz 150w 2 'x 2' box loop ant	229.95	**209^{95}**
1782	Super Hi-Q 10-30MHz loop/basic control	269.95	**249^{95}**
1786	Super Hi-Q 10-30MHz loop/dlx control	299.95	**269^{95}**
1312B	12vdc 300ma adapter; 1782/1786	12.95	
1792	80/40m 33' vertical antenna	159.95	**149^{95}**
1793	80/40/20m vertical antenna	179.95	**169^{95}**
1796	40/20/15/10/6/2m 10' vertical ant	199.95	**179^{95}**
1798	80/40/30/20/17/15/12/10/6/2m 20' vert	269.95	**249^{95}**
1824BB	Cell look alike BNC scanner ant	19.95	
1824BM	Cell look Motorola plug scanner ant	19.95	
1828B	Magnet mt BNC scanner antenna	29.95	
1828M	Mag mt Motorola plug scanner ant	29.95	
1864	Base scanner antenna w/preamp	79.95	**74^{95}**
2040	Repeater controller ....Dmwfv	449.95	**299^{95}**
3036	The Packet Radio Operators book	12.95	
3101	Fox Hunt Adventure book	7.95	
3210	Novice license guide	7.95	
3211	Tech Plus license guide	7.95	
3212	No code tech license guide	14.95	
3213	General license guide	7.95	
3214	Advanced license guide	7.95	
3215	Extra license guide	7.95	
3301	Troubleshooting Antenna & Feedlines book	12.95	
3302	73 Dipole and Long-Wire Antennas	12.95	
3303	73 Vertical, Beam, and Triangle Ants	12.95	
3304	Technician Antenna Handbook	12.95	
3502	Solid State QRP Projects	12.95	
3504	FET Principles, Experiments & Projects	16.95	
5024	MFJ TNC - Ico/Yae/Ali/RS HT cable	14.95	
5024X	PK-232 - Ico/Yae/Ali/RS HT cable	14.95	
5024YV	KAM VHF/KPC3 - Ico/Yae/Ali/RS HT cbl	14.95	
5024Z	PK-88 - Ico/Yae/Ali/RS HT cable	14.95	
5026	MFJ TNC - Kenwood HT cable	14.95	
5026X	PK-232 - Kenwood HT cable	14.95	
5026YV	KAM VHF/KPC3 - Kenwood HT cable	14.95	
5026Z	PK-88 - Kenwood HT cable	14.95	
5080	MFJ TNC - Yaesu 8-pin cable	14.95	
5080X	PK-232 - Yaesu 8-pin cable	14.95	
5080YH	KAM HF port - Yaesu 8-pin cable	14.95	
5080YV	KAM VHF/KPC3 - Yaesu 8-pin cable	14.95	
5080Z	PK-88 - Yaesu 8-pin cable	14.95	
5082	Open end - 8-pin mic cable	9.95	
5084	MFJ TNC - Icom 8-pin cable	14.95	
5084X	PK-232 - Icom 8-pin cable	14.95	
5084YH	KAM HF port - Icom 8-pin cable	14.95	
5084YV	KAM VHF/KPC3 - Icom 8-pin cable	14.95	
5084Z	PK-88 - Icom 8-pin cable	14.95	
5086	MFJ TNC - Kenwood/Alinco 8-pin cable	14.95	
5086X	PK-232 - Kenwood/Alinco 8-pin cable	14.95	
5086YH	KAM HF port - Ken/Ali 8-pin cable	14.95	
5086YV	KAM VHF/KPC3 - Ken/Ali 8-pin cable	14.95	
5086Z	PK-88 - Kenwood/Alinco 8-pin cable	14.95	
5222	Open end - Alinco split HT cable	9.95	
5224	Open end - Ico/Yae/Ali/RS HT cable	9.95	
5226	Open end - Kenwood HT cable	9.95	
5268	Open end - modular phone plug cable	7.95	
5412	IBM printer cable	9.95	
5413	RS-232 cable DB-25M-252	9.95	
5414	RS-232 cable DB-25M-9F2	9.95	
5803/10	3' coax jumper cable	4.95	
8100K	Shortwave regenerative Rcvr kit	59.95	
8100W	Shortwave regenerative Rcvr wired	79.95	**72^{95}**
8400K	2m receiver kit	69.95	**64^{95}**
8400W	2m receiver wired	89.95	**84^{95}**
9015	5w 15m CW Xcvr	179.95	**154^{95}**
9017	5w 17m CW Xcvr	179.95	**154^{95}**
9020	5w 20m CW Xcvr	179.95	**154^{95}**
9030	5w 30m CW Xcvr	179.95	**154^{95}**
9040	5w 40m CW Xcvr	179.95	**154^{95}**
27	Handle for CW station	4.95	

MFJ - continued

		Reg	Sale
412	Plug-in Curtis keyer	39.95	
726	Plug-in audio filter	29.95	
971	200w portable ant tuner w/meter	89.95	**84^{95}**
1770	Portable 15m dipole	34.95	
1771	Portable 17m dipole	34.95	
1772	Portable 20m dipole	34.95	
1773	Portable 30m dipole	34.95	
1774	Portable 40m dipole	34.95	
4112	Portable power pack	49.95	
4114	Rechargeable power pack	69.95	**64^{95}**
9115B	9015 Xcvr/971 tuner/4114 ps/1770 ant	329.80	**299^{95}**
9117B	9017 Xcvr/971 tuner/4114 ps/1771 ant	329.80	**299^{95}**
9120B	9020 Xcvr/971 tuner/4114 ps/1772 ant	329.80	**299^{95}**
9130B	9030 Xcvr/971 tuner/4114 ps/1773 ant	329.80	**299^{95}**
9140B	9040 Xcvr/971 tuner/4114 ps/1774 ant	329.80	**299^{95}**
9420X	12w 20m SSB Xcvr w/mic	229.95	**209^{95}**
415	SSB Xcvr CW adaptor	39.95	
4110	Portable AC power supply	39.95	

MIRAGE (MIR)

		Reg	Sale
A-1015G	6m FM/SSB 10/150w amp/preamp	$367.00	**339^{95}**
A-1035G*	6m FM/SSB 10/350w 28v amp/pre	616.00	**559^{95}**
B-23	2m FM/SSB 2/30w amplifier	122.00	**114^{95}**
B-23G	2m FM/SSB 2/30w amp/preamp	167.00	**154^{95}**
B-215G	2m FM/SSB 2/150w amp/preamp	356.00	**319^{95}**
B-108G	2m FM/SSB 10/80w amp/preamp	214.00	**194^{95}**
B-1016G	2m FM/SSB 10/160w amp/preamp	356.00	**319^{95}**
B-1030G	2m FM/SSB 10/300w amp/preamp	648.00	**589^{95}**
B-1060G*	2m FM/SSB 10/600w 28v amp/pre	1032.00	**929^{95}**
B-2516G	2m FM/SSB 25/160w amp/preamp	300.00	**269^{95}**
B-2530G	2m FM/SSB 25/300w amp/preamp	648.00	**589^{95}**
B-2560G*	2m FM/SSB 25/600w 28v amp/pre	1032.00	**929^{95}**
B-5016G	2m FM/SSB 50/160w amp/preamp	300.00	**269^{95}**
B-5030G	2m FM/SSB 50/300w amp/preamp	631.00	**569^{95}**
B-5060G*	2m FM/SSB 50/600w 28v amp/pre	1032.00	**929^{95}**

*Requires 28 volts; information on combining power supplies included in operations manual.

		Reg	Sale
C-22	220 FM/SSB 2/20w amplifier	122.00	**114^{95}**
C-22G	220 FM/SSB 2/20w amp/preamp	167.00	**154^{95}**
C-211G	220 FM/SSB 2/110w amp/preamp	337.00	**304^{95}**
C-106G	220 FM/SSB 10/60w amp/preamp	225.00	**204^{95}**
C-1012G	220 FM/SSB 10/120w amp/preamp	337.00	**304^{95}**
C-1022G	220 FM/SSB 10/220w amp/preamp	616.00	**559^{95}**
C-2512G	220 FM/SSB 25/120w amp/preamp	315.00	**289^{95}**
C-2522G	220 FM/SSB 25/220w amp/preamp	616.00	**559^{95}**
C-5012G	220 FM/SSB 50/120w amp/preamp	315.00	**289^{95}**
C-5022G	220 FM/SSB 50/220w amp/preamp	601.00	**539^{95}**
D-15N	430 FM/SSB/ATV 2/18w type N amp	187.00	**174^{95}**
D-26N	440 FM/SSB 2/60w type N amplifier	267.00	**244^{95}**
D-1010N	440 FM/SSB 10/100w type N amp	391.00	**354^{95}**
D-3010N	440 FM/SSB 30/100w type N amp	361.00	**329^{95}**
D-100-ATVN	430 ATV 1/52w type N amp	391.00	**354^{95}**
D-1010-ATVN	430 ATV 10/100w type N amp	391.00	**354^{95}**
RC-1*	Remote control head w/18' cable	42.00	

*Not for B-23/C-22/D-26

The following Repeater Amplifiers are available on Special Order. Specify SO-239 or type N connectors

		Reg	Sale
A-1015NR	6m FM 2/80w type N amplifier	$544.00	**499^{95}**
A-1015R	6m FM 2/80w SO-239 amplifier	524.00	**479^{95}**
B-215NR	2m FM 1/110w type N amplifier	529.00	**479^{95}**
B-215R	2m FM 1/110w SO-239 amplifier	509.00	**459^{95}**
B-1016NR	2m FM 2/120w type N amplifier	566.00	**519^{95}**
B-1016R	2m FM 2/120w SO-239 amplifier	546.00	**499^{95}**
B-2516NR	2m FM 12/120w type N amplifier	520.00	**469^{95}**
B-2516R	2m FM 12/120w SO-239 amplifier	500.00	**449^{95}**
C-211NR	220 FM .5/80w type N amplifier	589.00	**539^{95}**
C-211R	220 FM .5/80w SO-239 amplifier	569.00	**519^{95}**
C-1012NR	220 FM 5/90w type N amplifier	589.00	**539^{95}**
C-1012R	220 FM 5/90w SO-239 amplifier	569.00	**519^{95}**
C-2512NR	220 FM 15/90w type N amplifier	561.00	**509^{95}**
C-2512R	220 FM 15/90w SO-239 amplifier	541.00	**489^{95}**
D-1010NR	440 FM 4/80w type N amplifier	595.00	**539^{95}**
D-3010NR	440 FM 12/80w type N amplifier	566.00	**509^{95}**
D-100-ATVN-R	430 ATV 1/40w type N amp	595.00	**539^{95}**
D-1010-ATVN-R	430 ATV 4/80w type N amp	595.00	**539^{95}**

PREAMPS

		Reg	Sale
KP-1/10M	10m in shack preamp	$124.00	

MIRAGE - continued

		Reg	Sale
KP-1/6M	6m in shack preamp	124.00	
KP-1/2M	2m in shack preamp	124.00	
KP-1/220	220 in shack preamp	124.00	
KP-1/440	440 in shack preamp	124.00	
KP-2/10M	10m mast mount preamp	174.00	
KP-2/6M	6m mast mount preamp	174.00	
KP-2/2M	2m mast mount preamp	174.00	
KP-2/220	220 mast mount preamp	174.00	
KP-2/440	440 mast mount preamp	174.00	

WATTMETERS

		Reg	Sale
MP-1	160-10m 25/200/2kw PEP wattmeter	$211.00	**189^{95}**
MP-2	6 & 2m 50/500/1.5kw PEP wattmeter	211.00	**189^{95}**
MP-3	420-450 5/50/500w PEP wattmeter	240.00	**229^{95}**
MP-4	1.2 GHz 1/10/100w PEP wattmeter	255.00	**239^{95}**

MOTOROLA (MOT)

		Reg	Sale
Belt clip kit	for HTs ....Δmf	$ 19.95	**16^{95}**

NAVAL (NAV)

		Reg	Sale
HTS-2	5-15vdc amplified speaker	$ 29.95	

NEW WAVE (NEW)

		Reg	Sale
Portaple	Alum mast 26' extended 7 section m	$134.95	
Park-on Mount	Welded, unpainted mt ....m	99.95	

NICAD BATTERIES

GE NICADS (GEX)

		Reg	Sale
2GE3A	AAA size nicad ....Δm,pair	$ 6.81	**4^{95}**
BC-8B/Charge 8	Charger for 8 nicads ....Δm	21.99	**19^{95}**

JBRO NICADS (JAB)

		Reg	Sale
J/BP-4	Battery; Yaesu FNB-2/A	$ 24.95	
J/CM-2	Replacement inserts; Icom BP-2	24.25	
J/CM-3	Replacement inserts; Icom BP-3	27.40	
J/CM-5	Replacement inserts; Icom BP-5	30.50	
J/CM-7	Replacement inserts; Icom BP-7	37.20	
J/CM-8	Replacement inserts; Icom BP-8	37.40	
J/CM-7F	13.2v 450ma batt for Icom	72.70	**59^{95}**
J/CM-8F	8.4v 850ma batt for Icom	70.00	**59^{95}**

NORCOMM (NOR)

		Reg	Sale
NC-401	Sub-miniature DTMF decoder	$ 59.95	

NYE VIKING (NYE)

ANTENNA TUNERS AND ACCESSORIES

		Reg	Sale
MBIV-A1	3kw tuner without balun	$638.00	**569^{95}**
MBIV-A2	3kw tuner with balun	693.00	**599^{95}**
MBV-A	3kw tuner with ant switch & meters	791.00	**699^{95}**
MBV-B	As MBV-A, without meters	627.00	**549^{95}**
020-001	2kw low-pass filter	45.00	
RFM-003	3kw power monitor w/3kw coupler	375.00	**329^{95}**
RFM-005	5kw power monitor w/5kw coupler	395.00	**349^{95}**
C-1.8-30-5C	300/500w coupler	85.00	

PHONE PATCHES

		Reg	Sale
047-001	Phone patch w/4-pin, no spkr	$143.00	**129^{95}**
047-002	Phone patch w/8-pin, no spkr	159.00	**144^{95}**
047-003	Phone patch w/8-pin & spkr	170.00	**154^{95}**

SQUEEZE PADDLE

		Reg	Sale
SSK-001	Dual paddle Super Squeeze Key	$ 51.00	**49^{95}**

MASTER KEY

		Reg	Sale
330-001	Black enamel base w/cable, plug	$ 61.00	**59^{95}**

HEAVY DUTY SPEED-X KEYS WITH NAVY KNOBS

		Reg	Sale
320-001	No shorting switch	$ 28.60	
320-003	As above, w/shorting switch	32.45	
322-001	Brass hardware, no switch	30.50	
322-003	As above, w/shorting switch	34.65	

STANDARD SPEED-X KEYS

		Reg	Sale
310-001	Black, no shorting switch	$ 26.40	
310-003	As above, w/shorting switch	30.25	
312-001	Brass arm, no shorting switch	28.60	
312-003	As above, w/shorting switch	32.45	
315-001	Polished brass oval key, steel base	51.75	
315-003	As above, w/shorting switch	57.50	

KEY ACCESSORIES

		Reg	Sale
013-001	Navy knob	$ 7.50	
300-001	Black plastic base for keys ...Dmwfv	8.00	**2^{95}**
300-002	Hvy steel base, no-skid feet for keys	15.50	

CODE PRACTICE SETS (BUZZER)

		Reg	Sale
404-001	Code practice set without key	$ 23.00	

NYE - continued

Item	Description	Reg	Sale
404-002	Code practice set w/310-001 key	49.40	

Oak Bay Technologies (OAK)

Item	Description	Reg	Sale
AM-101B	BNC duck window mount	$ 24.95	
CA-232HH	Handheld packet cable	34.95	
CA-232U	Universal packet cable	34.95	
LP-11P	150db 1kw low-pass filter	69.95	
PS-101	Heavy duty DC power strip	79.95	

OUTBACKER (OUT)

Item	Description	Reg	Sale
OB-8	300w PEP 6' 75-10m 8-band mobile ant	$259.00	
OB-8HP	500w PEP 6' 75-10m 8-band mob ant	289.00	
OB-S8	8-band mobile ant w/storage bag	289.00	
OB-8TRI	3-pc 300w PEP 6' 8-band port ant	319.00	
OB-JR8	150w PEP 4' 75-10m 8-band mob ant	229.00	
Perth	7.5' 75/40/30/20/17/12/10m mobile ant	269.00	
OB-M	300w PEP 6' 75/40/20/17/10m/HF marine	389.00	
OB-SB	⅜-24 spring and ½" hole base	69.00	
Diamond **K-400K-3/8M**	⅜-24 trunk mt, coax	74.95	

Palomar Engineers (PAL)

Item	Description	Reg	Sale
LA-1	Loop amplifier; matches loop to Rcvr	$ 99.95	
5-15 MHz	plug-in loop (HF-1)	89.95	
1.6-5 MHz	plug-in loop (160m, 80m)	89.95	
.55-1.6 MHz	plug-in loop (AM broadcast)	89.95	
150-550 KHz	plug-in loop (LF, 1750m)	89.95	
40-150 KHz	plug-in loop (WWVB, Loran)	89.95	
10-40 KHz	plug-in loop (Omega)	89.95	
M-835	Bar graph HF auto SWR/power meter	199.95	189^{95}
MLB-1	Magnetic longwire receiving balun	39.95	
P-405	1.8-54 MHz 20 db 9v Rcvr preamp	149.95	139^{95}
P-408	1.8-54 MHz 20 db AC Rcvr preamp	159.95	149^{95}
P-410X	160-6m 20 db Xcvr preamp	179.95	169^{95}
P-412X	160-6m 20 db mobile Xcvr preamp	179.95	169^{95}
PF-300	SC audio filter	159.95	149^{95}
PK-200	Jones dual-paddle key	145.00	139^{95}
PT-340	Tuner-Tuner (use with ant tuner)	99.95	
RX-100	1-100 MHz RX noise bridge	79.95	
SB-4	2kw 1.7-30 MHz 4:1 balun w/SO-239	79.95	
VLF-A	VLF converter; 10-500 KHz to 80m	79.95	
VLF-S	VLF conv; 10-500 KHz to 4-4.5 MHz	79.95	

PANASONIC (PAN)

Item	Description	Reg	Sale
RF-B45	Compact FM/LW/MW/SW port Rcvr	$199.95	179^{95}
RF-B65	Compact FM/LW/MW/SW port Rcvr	279.95	249^{95}

PENETROX (PEN)

Item	Description	Reg	Sale
Penetrox A	4 oz tube for antennas	$ 7.20	

PERIPHEX (PER)

Item	Description	Reg	Sale
BP-7S	13.2v 1200ma battery for Icom	$ 65.00	
BP-8S	8.4v 1200ma battery for Icom	65.00	
BP-83S	7.2v 750ma battery for Icom	43.50	
BP-84S	7.2v 1400ma battery for Icom †	40.00	
BP-85S	12v 800ma battery for Icom	76.00	
BP-114S	12v 800ma battery for Icom	79.00	
FNB-12	12v 600ma battery for Yaesu	54.50	
FNB-14S	7.2v 1400ma battery for Yaesu	59.75	
FNB-26	7.2v 1000ma battery for Yaesu †	40.00	
FNB-26S	7.2v 1400ma battery for Yaesu	65.00	
FNB-27S	12v 800ma battery for Yaesu	65.00	
EBP-22S	12v 800ma battery for Alinco	65.00	
EBP-24S	7.2v 1500ma battery for Alinco †	40.00	
PB-7S	7.2v 1400ma battery for Kenwood †	40.00	
PB-8S	12v 800ma battery for Kenwood	59.00	
PB-13S	7.2v 1200ma battery for Kenwood	49.75	
PB-14S	12v 400ma battery for Kenwood	60.00	

PHILIPS (PHI)

Item	Description	Reg	Sale
U-105	Light duty rotor	$ 99.90	69^{95}
TB-105	Thrust bearing	18.25	

PICQUIC (PIC)

Item	Description	Reg	Sale
90101	Full size 6-in-1 screwdriver set	$ 16.95	
91102	Stubby 6-in-1 screwdriver set	12.95	

PIPO TOUCH-TONE PADS (PIP)

Item	Description	Reg	Sale
PK-1	12-digit pad	$ 71.00	
PK-1K	12-digit pad w/delay relay	78.00	
PK-1M	12-digit pad for surface mtg	71.00	
PK-2	16-digit pad	76.00	

PIPO - continued

Item	Description	Reg	Sale
PK-2K	16-digit pad w/delay relay	83.00	
PK-2M	16-digit pad for surface mtg	76.00	
PK-3-12	12-dig pad w/separate electronics Δm	58.00	39^{95}
PK-3-16	16-dig pad w/separate electronics Δm	63.00	44^{95}
PP-5	12-digit horizontal pad w/light Δm	69.00	49^{95}
PP-5V	12-digit vertical pad w/light	69.00	
P-7H	12-digit horiz rugged mini pad	58.00	
P-7V	12-digit vertical rugged mini pad	58.00	
P-8V	16-digit vertical rugged mini pad	63.00	

POLYPHASER (PLY)

LIGHTNING PROTECTION

Item	Description	Reg	Sale
IS-50NX-C2	125-1000 375/125/50w N flange	$ 52.95	
IS-50UX-C0	1.5-400 2kw/375/125w flange mt	52.95	
IS-50UX-C1	50-700MHz 375/125w flange mt	52.95	
IS-B50LN-C2	125-1000 375/125/50w N bulkhead	59.95	
IS-B50LU-C0	1.5-400 2kw/375/125w bulkhead	59.95	
IS-B50LU-C1	50-700MHz 375/125w bulkhead mt	59.95	
IS-PLDO-120-15A	120v 15A power protector	143.95	
IS-PLDO-120-20A	120v 20A power protector	179.95	
IS-RCT	8-wire rotor control protector	46.95	
IS-SPTL	Single phone line protector	57.95	
1.5" STRAP	1½" copper strap ....per linear ft.	.95	
3" STRAP	3" copper strap ....per linear ft.	2.75	
6" STRAP	6" copper strap ....per linear ft.	3.95	
AL-SPGP	Alum single point ground panel	52.95	
CU-SPGP	Copper single point ground panel	52.95	

PORTASOL (GC) (GCT)

Item	Description	Reg	Sale
P-1C/12-143	Portable butane soldering iron Δm	$ 29.99	12^{95}

PRO AM by VALOR (VAL)

VHF/UHF ANTENNAS ONLY (No Mounts)

Item	Description	Reg	Sale
MO144-440	2m/440 antenna	$ 21.90	
PAQA	136-515 MHz ¼ wave antenna	8.00	
PAQ-144	2m ¼ wave antenna	8.00	
PAQ-435	440 ¼ wave antenna	8.00	
PAQ-3820	2m ¼ wave whip w/⅜-24 thread	8.00	
PHB-144	2m ⅝ wave 3 db antenna	31.80	
PHB-220	220 ⅝ wave 3 db antenna	31.80	
PUB-440	440 5 db antenna	39.80	

MOUNTS ONLY FOR ABOVE ANTENNAS

Item	Description	Reg	Sale
PAM	Low profile magnet mount w/coax	$ 28.40	
PAS	¾" surface mount w/coax	20.00	
PASMO	¾" surface mt only (no coax)	7.90	
PAS38	⅜" surface mount w/coax	20.00	
PAS38MO	⅜" surface mt only (no coax)	7.90	
PAT-2	No hole trunk mount w/coax	27.90	
PAT-3	Swivel NMO-style trunk mt w/coax	35.80	

OTHER VHF/UHF ANTENNAS & MOUNTS

Item	Description	Reg	Sale
77BNC	2m/440 12" 0/2.1db BNC rubber duck	$ 23.90	
144BNC	2m 12" ¼ wave rubber duck w/BNC	11.00	
220BNC	220 10" ¼ wave rubber duck w/BNC	11.00	
450BNC	440 6½" ¼ wv rubber duck w/BNC	11.00	
BNC-SC	Suction cup extension; rubber ducks	14.70	
WMSL-BNC	Window clip for rubber ducks	42.80	39^{95}
82BNC	Magnet mt for BNC w/coax	27.00	
101ADN	HD alum mirror mt w/SO-239	7.20	
116N	Gutter mt for ⅜-24 up to 48"	9.40	
301	⅜-24 magnet mt only w/coax	22.40	
401	Low profile ⅜-24 mag mt only w/coax	27.80	
DAK	Mt for 2 vert ants or horizontal dipole	13.80	
GM-100AD	SS GM ⅜-24 mirror mt w/SO-239	10.60	
GM-100ADT	Alum GM ⅜-24 mirror mt, /SO-239	10.60	
GM-270	2m/440 2.6/6.3db on glass antenna	59.95	49^{95}
MM-3401	Maxi-mag mt ⅜-24 kit (3-5" mags)	59.90	49^{95}
SS-100MOT	3-way NMO mirror mt w/coax	23.80	
CX-144	2m ⅝ wave 3 db ⅜-24 whip	17.90	
CX-220	220 ⅝ wave 3 db ⅜-24 whip	17.90	
MM-270B	2m/440 mini mag mt ant w/BNC	56.60	39^{95}
PAQM	144-450 MHz ¼ wave BNC mag ant	28.80	
PM-144-440BN	2m/440 BNC mag mt ant	33.90	29^{95}
TGS	30-1200MHz on-glass scanner ant	51.90	
VAA-002	144-450 MHz ¼ wave mag mt ant	23.80	19^{95}
VAA-002BN	144-450 MHz ¼ wv BNC mag ant	27.80	22^{95}
120	Sawtooth hump mt for mobile radios	5.60	
D-270	2m/440 100w duplexer	45.90	39^{95}
DB-240	2m/440 base station antenna	105.20	79^{95}

PRO AM - continued

Item	Description	Reg	Sale
PDC-9	2m/440 0-50/0-60w SWR/pwr meter	52.95	49^{95}

MOBILE HF ANTENNAS (No Mounts)

Item	Description	Reg	Sale
AB-5	75/40/20/15/10m antenna	$119.60	
PHF-160	160m 8' ⅜-24 whip	97.80	
PHF-75	75m 8' ⅜-24 whip (4' coil, 4' whip)	29.80	
PHF-40	40m 8' ⅜-24 whip (4' coil, 4' whip)	23.80	
PHF-20	20m 8' ⅜-24 whip (4' coil, 4' whip)	23.80	
PHF-15	15m 8' ⅜-24 whip (4' coil, 4' whip)	23.80	
PHF-10	10m 8' ⅜-24 whip (4' coil, 4' whip)	23.80	

QSL Card Holders (ART)

Item	Description	Reg	Sale
QSL Card Holders	pack of 3, 20 cards/holder	$ 9.95	

RF CONCEPTS (RFC)

Item	Description	Reg	Sale
VHF1-60	2m 1/60w HT amplifier	$259.95	239^{95}
2-23	2m FM/SSB 2/30w amp/preamp	149.95	139^{95}
2-315	2m FM/SSB 30/150w amp/preamp	319.95	289^{95}
2-417	2m FM/SSB 45/170w amp/preamp	319.95	289^{95}
2/70	2m/440 FM 3/30//5/20w HT amp	259.95	239^{95}
2/70G	2m/440 FM 3/30//5/20w HT amp/preamp	289.95	259^{95}
2/70H*	2m/440 20/200//20/100w N amp	849.95	719^{95}

*Requires 28 volts; information on combining power supplies included in operations manual.

Item	Description	Reg	Sale
3-22	220 FM/SSB 2/20w amp/preamp	159.95	149^{95}
3-211	220 FM/SSB 2/110w amp/preamp	369.95	339^{95}
3-112	220 FM/SSB 10/120w amp/preamp	369.95	339^{95}
3-312	220 FM/SSB 30/120w amp/preamp	339.95	309^{95}
UHF-50	440 3/50w HT type N amplifier	299.95	279^{95}
4-32	440 FM/SSB 3/20w amp/preamp	199.95	184^{95}
4-110	440 FM/SSB 10/100w N amp/preamp	399.95	369^{95}
4-310	440 FM/SSB 30/100w N amp/preamp	399.95	369^{95}

RF PARTS (See Diamond)

RF PRODUCTS (RFP)

Item	Description	Reg	Sale
196-214	2m ¼ wave BNC telescopic whip	$ 8.95	
199-416	BNC mag mt, 10' coax w/BNC	17.95	
199-495	SO-239 mag mt, 13' coax w/PL-259	23.95	

Radio Amateur Callbook (RAC)

Item	Description	Reg	Sale
087158	1994 North American Callbook	$ 29.95	
087190	1994 International Callbook	29.95	
059251	1994 World Radio TV Handbook	19.95	
087778/RC0012	Great Circle Map Δmw	9.95	

RADIO PUBLICATIONS

Item	Description	Reg	Sale
087034	All About Cubical Quad Antennas	$ 11.95	
087042	Beam Antenna Handbook	11.95	
087050	All About VHF Amateur Radio	11.95	
087069	Radio Amateur Antenna Handbook	11.95	
087077	Simple, Low Cost Wire Antennas	11.95	
087093	Interference Handbook	11.95	
087107	All About Vertical Antennas	11.95	

GORDON WEST RADIO SCHOOL

Item	Description	Reg	Sale
087301/GW0002	Nov Code Long Course Δmfv	$ 39.95	
08731X/GW0020	No Code Novice/Tech Δmwv	49.95	
087328/GW0005	Novice Code Short Course Δwv	39.95	
087336/GW0010	2-Week Tech Theory Δmwfv	34.95	
087352/GW0008	General Code Course Δmfv	39.95	
087360/GW0007	Complete Gen Course Δmfv	69.95	
087379/GW0015	Advanced Theory Δmf	44.95	39^{95}
087387/GW0018	Extra Theory Course Δmfv	44.95	
087395/GW0017	Extra Code Course Δmfv	44.95	
087409/GW0016	Complete Extra Δmv	69.95	
GW0012	Tech/General Theory Course Dmv	34.95	14^{95}
GW0013	Complete Advanced (5-13wpm) Dmf	59.95	39^{95}
GW0014	Complete Adv (13-22wpm) Dm	59.95	39^{95}

On major products ask your salesperson about...

- **Late Breaking "Hot Deals"**
- **Latest Sale Prices**
- **Monthly specials**
- **Coupons, etc.**

Info also available on the **AES®** BBS
1-414-358-3472

CALLBOOK - continued

Item	Description	Reg	Sale
RC0055	N6RJ Elec 2nd Op, 5¼" IBM ....Δmv	59.95	29^{95}
087263	Novice Voice Class	5.95	
087417/GW0990	FCC Rules and Regulations	3.50	

RANGER (RAN)

Item	Description	Reg	Sale
RCI-2950	8/25w FM/SSB 10m Xcvr	$449.95	259^{95}
RCI-2970	100w FM/SSB 10m Xcvr	699.00	399^{95}

Revere Industries (REV)

Item	Description	Reg	Sale
RCS-1	Mobile mini speaker ....m	$ 12.95	

ROHN TOWERS (ROH)

Item	Description	Reg	Sale
HBX-40/BXB-6	40' tower, 10 sq ft, 228 lbs *T	$444.90	379^{95}
HBX-48/BXB-7	48' tower, 10 sq ft, 303 lbs *T	595.30	499^{95}
HBX-56/BXB-8	56' tower, 10 sq ft, 385 lbs *T	751.70	629^{95}
HDBX-40/BXB-7	40' tower, 18 sq ft, 281 lbs *T	553.30	469^{95}
HDBX-48/BXB-8	48' tower, 18 sq ft, 363 lbs *T	736.70	619^{95}

*Drop-shipped from factory or limited stock in Milwaukee for pick-up

On factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB the Rohn factory, which has various locations, via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these drop-shipped towers. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

Note: Rohn states that "antennas developing a large twisting moment due to wind must not be used on HBX/HDBX-series towers. Antennas should be limited to those having a maximum boom length of 10 ft."

SGC (SGC)

Item	Description	Reg	Sale
04-01	SG-2000 150w 1.8-30 MHz 12v Xcvr	1995.00	1479
04-02	.5-30 MHz 12v Rcvr (**special order**)	1700.00	1529
04-03	150w 1.8-30MHz 12v Xmtr (**spec order**)	1700.00	1529
04-11	Remote head w/yoke mount & cable	695.00	629^{95}
04-12	Remote kit w/swivel bkt & cable	200.00	179^{95}
04-13	Remote kit w/5-way mount & cable	350.00	319^{95}
04-14	Rem kit w/suction cup mt & cable	495.00	449^{95}
51-81	Fan kit for continuous duty xmit	300.00	269^{95}
52-31	Waterproof military handset	375.00	339^{95}
52-32	Telephone handset	190.00	174^{95}
52-34	RS-232 interface for SG-2000 Xcvr	195.00	179^{95}
52-46	Mounting tray	50.00	
52-47	Shock/military mounting tray	300.00	269^{95}
52-51	CA-1 High voltage feed wire ..per ft.	70¢	
52-52	CA-2 RG-58 coax cable ....per ft.	90¢	
52-53	CA-230 Ant coupler cable ......per ft.	4.00	
52-54	CA-2000 Remote head cable .per ft.	4.00	
52-56	CA-4 RG-8A/U coax cable ......per ft.	1.10	
53-03	PS-35/AC 30A/45A peak HD ps	700.00	629^{95}
52-61	PSC/12-1 12' ps cable, 1 plug	50.00	
52-62	PSC/12-2 12' ps cable, 2 plugs	60.00	
52-63	PSC/25-1 25' ps cable, 1 plug	60.00	
52-64	PSC/25-2 25' ps cable, 2 plugs	70.00	
53-53	PS fan kit for continuous xmit	300.00	269^{95}
52-93	SG-500 1.8-24 MHz 500w PEP amp	995.00	949^{95}
54-12	SG-230 150w 1.8-30 MHz 12v auto tuner	595.00	489^{95}
54-61	25' extension cable	60.00	
54-62	50' extension cable	90.00	
54-63	SmartLock; tuners made after 9/1/93	59.95	
55-04	SG-103 1.8-30MHz broadband 150w dip †	450.00	199^{95}
55-06	SG-104 2-28 MHz 90' 1kw dipole	700.00	629^{95}
55-27	SG-303 1.8-30 9' mobile whip & mt	495.00	449^{95}
55-67	Replacement whip for SG-303	150.00	139^{95}
55-41	SG-104 2-28MHz 90' 1kw dipole w/coax	750.00	679^{95}
55-45	QMS Quick universal mount system	490.00	449^{95}
55-46	QMS-1 Quick mt system w/SG-230	1085.00	979^{95}
55-47	QMS-2 Quick mt sys w/SG-230/303 .†	1580.00	895^{00}
55-91	60' RG-58/U coax w/PL-259s	50.00	
55-92	120' RG-58/U coax w/PL-259s	70.00	
55-93	60' RG-8 coax w/PL-259s	80.00	
55-94	120' RG-8 coax w/PL-259s	120.00	
55-95	150' total extension; SG-103/104	70.00	
56-15	External ARQ/FEC system	1200.00	1069
90-30	SG-2000-RS Spares kit for SG-2000	789.00	709^{95}
90-31	SG-2000-DS Depot spares kit; SG-2000	1512.00	1349
90-32	SG-2000-CS Dlx spares kit; SG-2000	3953.00	3549
91-92	SG-2000-MM Maint manual; SG-2000	70.00	

SGC - continued

Call for quote on SGC commercial ALE system

SAMS Books (SAM)

Item	Reg	Sale
Active Filter Cookbook	$ 24.95	
CMOS Cookbook	24.95	
IC OP-AMP Cookbook	24.95	
IC Timer Cookbook	24.95	
Radio Handbook	39.95	
Radio Operators Commercial License Q & A Manual	24.95	

SANGEAN (SAN)

Item	Description	Reg	Sale
ATS-202	AM/FM/SW portable receiver	$159.00	99^{95}
ATS-803A	AM/FM/shortwave portable Rcvr	249.00	189^{95}
ATS-808	AM/FM/shortwave portable Rcvr	259.00	189^{95}
ATS-818CS	AM/FM/SW port Rcvr w/cassette	359.00	269^{95}
DT-200V	AM/FM/VHF TV sound dig port Rcvr	79.95	69^{95}

SHAKESPEARE (SHA)

Item	Description	Reg	Sale
376-GB	10m 18' tunable fg base ant (UPS OK)	$ 94.25	59^{95}

SHURE (SHU)

Item	Description	Reg	Sale
444D	High/low-Z desk microphone	$ 92.25	79^{95}
R111	Replacement cartridge	28.35	
526T Series II	Dynamic amplified desk mic	124.00	109^{95}
R96	Replacement cartridge	25.40	
404C	High-Z deluxe mobile microphone	59.75	54^{95}
R5F	Replacement cartridge	27.60	

SMILEY ANTENNA (SMI)

Item	Description	Reg	Sale
270A	2m/440 gain telescopic whip	$ 19.95	
5/8 SLD-2	2m ⅝ Slim Duck rubber ant	17.95	
5/8 SLD-220	220 ⅝ Slim Duck rubber ant	17.95	
5/8 SLD-440	440 ⅝ Slim Duck rubber ant	17.95	
5/8 SLD-2 Combo	2m ⅝ duck & stubby ant	24.95	
5/8 SLD-220 Combo	220 ⅝ duck & stubby ant	24.95	
5/8 SLD-440 Combo	440 ⅝ duck & stubby ant	24.95	
FLX 1/2 WAV-2M	½ wv 2m BNC whip/flex coil	25.95	
RD-2	2m rubber duck antenna	14.95	
RD-220	220 rubber duck antenna	14.95	
RDMD-2	2m mini rubber duck antenna	14.95	
RDMD-220	220 mini rubber duck antenna	14.95	
RDMD-440	440 mini rubber duck antenna	14.95	
RDS-2	2m stubby rubber duck antenna	14.95	
RDS-220	220 stubby rubber duck antenna	14.95	
RDS-440	440 stubby rubber duck antenna	14.95	
SD-2	2m Slim Duck thin rubber antenna	14.95	
SD-220	220 Slim Duck thin rubber antenna	14.95	
SL-440	440 slimline type duck	12.95	
SS-II	Super Stick 2m ⅝ wv telescopic ant	19.95	
SS-III	Super Stick 220 ⅝ wv telescopic ant	19.95	
SS-IV	Super Stick 440 ⅝ wv telescopic ant	19.95	
SS-II/Combo	2m ⅝ wv telescopic & stubby ant	26.95	
SS-III/Combo	220 ⅝ wv telescopic & stubby ant	26.95	
SS-IV/Combo	440 ⅝ wv telescopic & stubby ant	26.95	
TAQ-2	2m ¼ wave stainless whip	10.95	
TAQ-220	220 ¼ wave stainless whip	10.95	
TAQ-440	440 ¼ wave stainless whip	10.95	
TS	Thin Stick 2m/220 ⅜ wave telescopic whip	16.95	

SOLARCON (SOL)

Item	Description	Reg	Sale
A-99	10m fiberglass base station antenna	$ 74.95	59^{95}
GPK-1	Ground plane radial kit	39.95	

SOLDER-IT (SLD)

Item	Description	Reg	Sale
ALP-21D	Aluminum solder paste, 7.1gm	$ 6.00	
SP-7D	Solder paste, 7.1 gm	6.00	

SONY (SON)

Item	Description	Reg	Sale
ICF-7601	AM/FM/SW portable receiver .....Dm	159.95	119^{95}
ICF-SW15	AM/FM/SW port receiver .....Dmwfv	89.95	79^{95}
ICF-SW800	AM/FM/SW port/prog cards Dmwfv	149.95	89^{95}
ICF-SW7600	AM/FM/SW receiver ....Dm	249.95	219^{95}
ICF-2010	AM/FM/SW/LW/air port Rcvr w/ps	429.95	359^{95}
ICF-SW10	AM/FM/SW compact receiver		69^{95}
ICF-SW30	AM/FM/SW portable receiver	129.95	119^{95}
ICF-SW33	AM/FM/SW portable receiver	199.95	169^{95}
ICF-SW55	AM/FM/SW portable receiver	429.95	369^{95}
ICF-SW77	AM/FM/SW portable receiver	624.95	499^{95}
ICF-SW100S	AM/FM/SW portable receiver		369^{95}
ICF-SW7600G	AM/FM/SW portable receiver	229.95	199^{95}
AN-1	LW/MW/SW outdoor active receive ant	119.95	99^{95}

SONY - continued

Item	Description	Reg	Sale
AN-3	Aircraft active receive antenna	99.95	
AN-102	LW/MW/SW indoor active receive ant	84.95	
IPS-360	GPS Rcvr w/batt case ....Dmwfv	699.00	499^{95}
IPS-760	8-channel GPS Rcvr	1599.00	1169

The following are SONY Consumer Products available from our Audio Plus division in Oshkosh, Wisconsin.

Please call Don or Paul at Audio Plus direct for information and to place your order. *Also see page 152...*

Ph. (800) 462-9489 • (414) 235-8934

MINI DISC

Item	Description	Reg	Sale
MZ-R2	Mini disc player/recorder	$749.99	639^{95}
MZ-E2	Mini disc player	549.99	449^{95}

DISCMAN

Item	Description	Reg	Sale
D-131	1 bit w/mega bass	$139.99	99^{95}
D-335	Top of the line car discman, 1 bit 2xESP	349.99	259^{95}

AM/FM WALKMAN

Item	Description	Reg	Sale
SRFM33	Digital w/presets	$ 39.99	34^{95}
SRF36	FM only	19.99	12^{95}

AM/FM CASSETTE WALKMAN

Item	Description	Reg	Sale
WMFX407	Dig/presets/auto rev/Dolby/mega bass	$ 89.99	69^{95}
WMFX507	Super Walkman! Dig/auto rev/Dolby	179.99	139^{95}

SPORTS WALKMAN

Item	Description	Reg	Sale
SRF85	AM/FM only	$ 49.99	34^{95}
SRFM70	Digital tuner w/10 presets	64.99	49^{95}
WMFS395	Top of the line! Dig/Dolby/water res	99.99	89^{95}

PORTABLES

Item	Description	Reg	Sale
CFD8	AM/FM, CD, cassette	$129.99	99^{95}
CFD610	Dig w/remote/6 disc CD changer/hi pwr	349.99	269^{95}
CFD768	1 bit CD, dig, autoreverse, rem, 20w	389.99	299^{95}

MICRO CASSETTES

Item	Description	Reg	Sale
M425	Pressman micro recorder	$ 32.99	27^{95}
M727V	VOR w/tape counter	69.99	56^{95}

ANSWERING MACHINES

Item	Description	Reg	Sale
TAM50	Voice time & date stamp, rem call bk	$129.99	69^{95}
ITA3000	Integrated phone/dig ans machine	299.99	219^{95}

FEATURE PHONES

Item	Description	Reg	Sale
ITD10	Scratch pad memory	$ 69.99	49^{95}
ITD20	2-line, distinctive ring for each line	99.99	79^{95}

CORDLESS PHONES

Item	Description	Reg	Sale
SPP160	10 ch, spkr phone, 2-way intercom	$249.99	149^{95}
SPPD15	2 line, 10 number memory	269.99	179^{95}
SPPX90	10 ch, top of the line, 2 phones in 1	349.99	259^{95}

SOUTH RIVER (UPS OK) (SOU)

Item	Description	Reg	Sale
HDT-3E-PPK	3' boxed tripod	$ 17.95	
HDT-5E-PPK	5' boxed tripod	25.95	

STANDARD (STA)

Item	Description	Reg	Sale
C-158A	Dlx mini 2m FM HT/batt/cgr/TTP	$339.00	CALL
	FREE CMP-115 from Standard - C-158A thru 7/15/94		
C-178A	2m/440 FM HT/batt/cgr/TTP/CTCSS	459.00	CALL
	FREE CMP-115 from Standard - C-178A thru 7/15/94		
C-228A	2m/220 FM HT/batt/cgr/TTP/CTCSS	695.00	CALL
	FREE CLC-520 from Standard - C-228A thru 7/15/94		
C-528A	2m/440 FM HT/batt/cgr/TTP/CTCSS	495.00	CALL
	FREE CLC-520 from Standard - C-528A thru 7/15/94		
C-558A	2m/440 FM HT/batt/cgr/TTP/CTCSS	689.00	CALL
	FREE CMP-115 from Standard - C-558A thru 7/15/94		
C-628A	440/1.2 FM HT/batt/cgr/TTP/CTCSS	727.00	CALL
	FREE CLC-520 from Standard - C-628A thru 7/15/94		
CAX-02	Bottom cover	12.00	
CAW-150	Mobile power supply cable	16.50	
CAW-151	12vdc power supply cable	13.50	
CAW-152	Cig cord w/filter; 178A	28.00	
CBT-151	Battery case	20.00	
CBT-171	6 cell battery case; 178A	20.00	
CBT-175	2 cell battery case; 178A	16.00	
CHP-111	Headset mic w/PTT switch	45.00	
CHP-150	Headset mic w/VOX	81.00	
CMB-600	Helmet clip for CHP-150	13.00	
CLC-171	Soft case for CNB-171; 178A	29.00	
CLC-172	Soft case for CNB-172/173; 178A	29.00	

STANDARD - continued

Item	Description	Reg	Sale
CLC-175	Soft case for CBT-175; 178A	29.00	
CLC-401	Standard soft case; 108A	14.00	
CLC-402	Deluxe soft case; 108A	22.00	
CLC-520	Std carrying case; 228A/528A	24.00	
CLC-521	Large carrying case; 228A/528A	27.00	
CLC-550	Standard carrying case; 558A	27.00	
CLC-551	Large carrying case; 558A	30.00	
CLC-555GN	Green case for 558A	34.00	
CLC-555OR	Orange case for 558A	34.00	
CMB-111	Mobile bracket	21.00	
CMB-112	Mounting bracket; 178A	26.00	
CMC-150	Mobile charger	27.00	
CMP-111	Speaker/mic	54.00	
CMP-113	Tie-pin spkr/mic	44.00	
CMP-115	Mini speaker/mic	50.00	
CMU-160	40 ch memory; 558A/168A	31.00	
CMU-161	200 ch memory; 558A/168A	44.00	
CNB-151	Extra 7.2v 700ma nicad batt	78.00	
CNB-152	12v 600ma nicad battery	99.00	
CNB-153	7.2v 1000ma nicad battery	99.00	
CNB-171	7.2v 700ma nicad battery; 178A	79.00	
CNB-172	12v 600ma nicad battery; 178A	120.00	
CNB-173	7.2v 1100ma nicad batt; 178A	99.00	
CNB-401	Nicad battery; 108A	20.00	
CSA-181A	Desk rapid charger	124.00	119^{95}
CSA-401A	Desk charger for C-108A	43.00	
CTN-520	Enc/decode; early 228/528A Δmwf	92.00	69^{95}
C-168A	Dlx sub-mini 2m FM HT/batt/cgr/TTP	469.00	CALL
	FREE CAX-160 from Standard - C-168A thru 7/15/94		
C-468A	Dlx sub-mini 440 FM HT/batt/cgr/TTP	480.00	CALL
	FREE CAX-160 from Standard - C-468A thru 7/15/94		
CAX-03	Bottom cover	12.00	
CAX-160	Remote battery adapter	50.00	
CBT-160	Battery case	20.00	
CHP-111	Headset mic w/PTT switch	45.00	
CHP-150	Headset mic w/VOX	81.00	
CLC-160	Mini carrying case	26.00	
CLC-161	Mini carrying case	26.00	
CLC-162	Mini carrying case	27.00	
CMP-111	Speaker/mic	54.00	
CMP-113	Tie-pin spkr/mic	44.00	
CMP-115	Mini speaker/mic	50.00	
CMU-160	40 ch memory; 168A/558A	31.00	
CMU-161	200 ch memory; 168A/558A	44.00	
CNB-160	Mini 6v 300ma nicad battery	72.00	
CNB-161	Mini 7.2v 700ma nicad battery	75.00	
CNB-162	Mini 12v 600ma nicad battery	125.00	
CNB-163	Mini 7.2v 1000ma nicad batt	99.00	
CSA-181A	Desk rapid charger	124.00	119^{95}
C-188A	Thin sub-mini 2m HT/batt/cgr/TTP	489.00	CALL
	FREE CMP-115 from Standard - C-188A thru 7/15/94		
C-288A	Thin sub-mini 220 HT/batt/cgr/TTP	499.00	CALL
	FREE CMP-115 from Standard - C-288A thru 7/15/94		
CBT-181	Battery case for 4 AA	17.00	
CBT-182	Battery case for 5 AA	27.00	
CHP-111	Headset mic w/PTT switch	45.00	
CHP-150	Headset mic w/VOX	81.00	
CLC-181	Carrying case w/CNB-181	21.00	
CLC-182	Carrying case w/CNB-182/3/4	24.00	
CMA-181	Mobile adapter	38.00	
CMP-111	Speaker/mic	54.00	
CMP-113	Tie-pin spkr/mic	44.00	
CMP-115	Mini speaker/mic	50.00	
CMU-182	200 ch memory for C-188A/288A	44.00	
CNB-181	4.8v 700ma nicad battery	57.00	
CNB-182	9.6v 600ma nicad battery	99.00	
CNB-183	6v 1100ma nicad battery	95.00	
CNB-184	6v 700ma nicad battery	65.00	
CSA-181A	Desk rapid charger	124.00	119^{95}
C-108A	200mw 2m FM HT	269.00	CALL
C-1208DA	50w 2m FM Xcvr w/TTP	529.00	CALL
C-5608DA	50/40w 2m/440 FM Xcvr w/TTP	890.00	CALL
CSK-12	External speaker	47.00	
C-5718DA	50/40w 2m/440 FM Xcvr/packet	849.00	CALL
CAW-570	Split cable for microphone	62.00	
CAW-571	6.5' mic extension cable	43.00	
CAW-572	13' mic extension cable	48.00	
CRC-5700	Front panel w/freq display	228.00	
CAW-573	6.5' front panel extension cable	27.00	

STANDARD - continued

Item	Description	Reg	Sale
CAW-574	13' front panel extension cable	36.00	
CCR-708A	50-905 MHz spectral display Rcvr	750.00	CALL

STARTEK (STR)

Item	Description	Reg	Sale
15-BG	1-1500MHz bar graph ultra hi sens ctr	$220.00	169^{95}
15-UHS	1-1500 MHz ultra high sens ctr	159.00	149^{95}
35-BG	1-3200 MHz bar graph ultra hi sens ctr	265.00	229^{95}
1350	1-1300 MHz frequency counter	129.00	119^{95}
2500	10 Hz-2400 MHz frequency counter	210.00	189^{95}
3500	10 Hz-3500 MHz frequency counter	250.00	219^{95}
ATH-10	1-1200 MHz freq counter w/ATH	179.00	159^{95}
ATH-15	1-1500MHz bar graph freq counter	235.00	199^{95}
ATH-15/OS	1-1500Mhz ctr w/1-shot opt m	275.00	239^{95}
ATH-15/OS/HS	1500MHz/1-shot/hi stab m	375.00	339^{95}
ATH-30	1-2800MHz bar graph ctr w/1-shot	299.00	249^{95}
ATH-30/HS	2800MHz/1-shot/hi-stability	399.00	349^{95}
ATH-50	5Hz-2800MHz bar/auto trig/hi speed	339.00	289^{95}
ATH-50/HS	2800MHzr/trig/hi spd/hi stability	439.00	389^{95}
CC-90	Carrying case	12.00	
DC-10	Direct probe	22.00	19^{95}
HP-400	400 - 1500 MHz bandpass filter	69.00	59^{95}
HP-800	800 MHz - 2 GHz bandpass filter	69.00	59^{95}
LP-22	Lo-pass probe	29.00	24^{95}
LP-60	DC - 60 MHz bandpass filter	69.00	59^{95}
M-207-IC	Interface cable	10.00	
P-110	200 MHz X1-X10 probe	69.00	39^{95}
RD-2750	27-50MHz rubber duck antenna	28.00	
RD-150	150MHz rubber duck antenna	16.00	
RD-450	450MHz rubber duck antenna	16.00	
RD-800	800MHz rubber duck antenna	29.00	24^{95}
TA-90	Telescopic antenna	12.00	
TA-90L	Right angle telescopic antenna	16.00	

TPS (TPS)

Item	Description	Reg	Sale
PS-15	15A power supply Δm	$150.00	69^{95}
Rack Mount	Δmw	48.00	9^{95}

TPS not recommended for HF Transceivers

TAB Books (TAB)

Title		Reg	Sale
How to be a Ham 3rd Edition	Dm	$ 13.60	
Complete Shortwave Listener		19.95	
Advanced Appleworks	Δm	17.60	

TEMPO (TEM)

Item	Description	Reg	Sale
BP-15	Extra battery pack; S-15/S-15T Δm	$ 39.00	
TS-BP2	Extra 450ma batt; S-2/4/5/late S-1 Dm	39.00	

TEN-TEC (TEN)

Item	Description	Reg	Sale
216	500 Hz 6-pole FSK filter (9 MHz) Δm	$ 74.00	29^{95}
259	Universal ALC annunciator; 585 Δm	39.00	6^{95}
264	Rem control extension cbl; 420/253 Δm	32.00	14^{95}
300	12' extension cable for 9423 Δm	45.00	4^{95}

CONSTRUCTO SERIES EQUIPMENT ENCLOSURES

Item	Description	Reg	Sale
BU-625	Blue, 6"W x 2½"H x 5"D	$ 30.06	
BU-649	Blue, 6"W x 4"H x 9"D	36.78	
BU-927	Blue, 9"W x 2½"H x 7"D	34.53	
BU-945	Blue, 9"W x 4"H x 5"D	34.59	
BU-949	Blue, 9"W x 4"H x 9"D	41.03	
BU-959	Blue, 9"W x 5½"H x 9"D	42.40	
BU-1227	Blue, 12"W x 2½"H x 7"D	37.68	

GREY PANELS W/BLACK SIDE PANELS

Item	Description	Reg	Sale
DG-8	8"W x 4½"H x 10½"D	$ 22.78	
JG-8	8¼"W x 2½"H x 6"D	12.99	
LG-5	5"W x 3¼"H x 7"D	11.46	
LG-10	10¼"W x 3¼"H x 7"D	16.90	
MG-8	4½"W x 8¼"H x 6½"D	16.36	

H-SERIES BOX

Item	Description	Reg	Sale
HG-8	Low profile, 8"W x 4½"H x 6"D	$ 16.15	

WALNUT TRIM W/BEIGE PANELS

Item	Description	Reg	Sale
DW-12	12"W x 4½"H x 10½"D	$ 30.78	
JW-10	10¼"W x 2½"H x 6"D	16.30	
LW-5	5"W x 3¼"H x 7"D	13.66	
LW-6	6"W x 3¼"H x 7"D	15.04	
LW-10	10¼"W x 3¼"H x 7"D	18.41	
MW-8	4½"W x 8¼"H x 6½"D	19.08	
MW-12	4½"W x 12⅜"H x 6½"D	23.28	

GREY W/BLACK TOP COVER

Item	Description	Reg	Sale
TG-24	4¼"W x 1¾"H x 4⅛"D	$ 7.96	
TG-26	6¼"W x 1¾"H x 4⅛"D	9.03	
TG-28	8¼"W x 1¾"H x 6⅛"D	11.59	

TEN-TEC - continued

Item	Description	Reg	Sale
TG-36	6¼"W x 3"H x 4⅛"D	10.01	
TG-38	8¼"W x 3"H x 6⅛"D	14.41	

UNPAINTED

Item	Description	Reg	Sale
TP-13	3¼"W x 1¼"H x 2½"D	$ 4.18	
TP-17	4¼"W x 1¾"H x 3½"D	5.47	
TP-20	5"W x 2⅛"H x 4¼"D	5.78	
TP-42	5¾"W x 2⅜"H x 4¾"D	6.79	
TP-44	6¼"W x 2⅝"H x 5¼"D	7.19	
TP-46	7"W x 2⅞"H x 5¾"D	8.74	
TP-48	7½"W x 3⅛"H x 6⅛"D	10.23	
TP-50	8¼"W x 3⅜"H x 6⅜"D	11.49	

BEIGE W/WALNUT TOP COVER

Item	Description	Reg	Sale
TW-26	6¼"W x 1¾"H x 4⅛"D	$ 9.03	
TW-28	8¼"W x 1¾"H x 6⅛"D	11.59	

TIMEWAVE (TIM)

Item	Description	Reg	Sale
DSP-9	Digital signal processing unit, ver 2.0	$169.00	
DSP-9 PLUS	Advanced dig sig processing unit	219.00	
DSP-59 PLUS	Dlx dig signal processing unit	299.00	

TUBES (TUB)

Item	Description	Reg	Sale
6146B	Tube each	$ 16.95	
12BY7A	Tube each	14.50	
3-500G	High dissipation tube (3-500Z) each	119.95	
572B	For Yaesu, etc. each	69.95	
811A	For Collins, etc. each	16.95	

Also see EIMAC

TUNE BELT (TUN)

Item	Description	Reg	Sale
HH-1PL	Up to 8" HT radio belt	$ 16.95	
HH-2PM	Up to 6" HT radio belt w/batt pocket	17.95	
HH-2PL	Up to 8" HT radio belt w/batt pocket	17.95	

US TOWER (UST)

FREE STANDING CRANK-UPS (T^2X not recommended)

Item	Description	Reg	Sale
TX-438	38' crank-up tower T	1133.00	1019
TX-455	55' crank-up tower T	1710.00	1539
TX-472	72' crank-up tower T	2810.00	2529
TX-472MDP	72' crank-up w/motor drive T	4521.00	4068
TX-489	89' crank-up tower T	4888.00	4399
TX-489MDPL	89' crank-up w/motor drive T	7332.00	6598

FREE STANDING HEAVY DUTY CRANK-UP TOWERS

Item	Description	Reg	Sale
HDX-538	38' crank-up tower T	1466.00	1319
HDX-555	55' crank-up tower T	2566.00	2309
HDX-572	72' crank-up tower T	4399.00	3959
HDX-572MDPL	72' crank-up w/motor drive T	6721.00	6048
HDX-589MDPL	89' crank-up w/motor drive T	8799.00	7919
HDX-689MDPL	89' HD crank-up w/motor T	16999.00	15299
HDX-5106MDPL	106' HD crank-up w/motor T	18499.00	16649

COMPACT TMM (Top mount rotor for full retraction)

Item	Description	Reg	Sale
TMM-433SS	33' crank-up tower T	1210.00	1089
TMM-433HD	33' HD crank-up tower T	1466.00	1319
TMM-541SS	41' crank-up tower T	1588.00	1429

ACCESSORIES FOR CRANK-UP TOWERS

Item	Description	Reg	Sale
CX-2	Coax arms (2) for 2-section tower	$ 49.00	
CX-3	Coax arms (3) for 3-section tower	69.00	
CX-4	Coax arms (4) for 4-section tower	109.00	
CX-5	Coax arms (5) for 5-section tower	149.00	134
CX-6	Coax arms (6) for 6-section tower	189.00	170
HDP	Service platform T	739.00	665
STS-4	Rotor accessory for TX/TMM towers T	210.00	189
IV-16	Inverted vee arm for MA's	37.00	
M-5	2" OD 5' mast extension for MA's	36.00	
M-10	2" OD 10' mast T	69.00	
M-15	2" OD 15' mast T	103.00	
M-20	2" OD 20' mast T	136.00	122
M-15R	2" OD 15' reinforced mast T	155.00	140
M-20R	2" OD 20' reinforced mast T	205.00	184
CM-20	2" OD 20' .375 wall mast T	449.00	404
MD-75	Heavy duty 1 HP motor drive T	989.00	890
MDP-750	Pull-down drive; TX-472/HDX-555 T	1539.00	1385
MDPL-1000	Pull-down drive; HDX-572 T	2089.00	1880
MRF	Mast raising fixture	266.00	239
MCL-100	Limit switch package	432.00	388
RMC-1000	Remote control w/limit switch	989.00	890
RP-3	Rotor plate for 10" section	20.00	
RP-4	Rotor plate for 12½" section	26.00	
RP-5	Rotor plate for 15" section	32.00	

US TOWER - continued

		Reg	Sale
TRX-80 Raising fixture; TX-438/455;HDX-538/555	T	431.00	387
TRX-80HD Raising fixture;TX-472/489;HDX-572/589	T	567.00	510
TRX-100HD Raising fixture; HDX-689/5106	T	799.00	719
TB-2US Thrust bearing; 2" mast w/2 flange holes		98.00	

MA-SERIES TUBULAR TOWERS

		Reg	Sale
MA-40 40' crank-up mast	†T	$899.00	679
MA-550 55' crank-up mast	†T	1521.00	1069
MA-550MDP 55' crank-up mast w/motor	T	2909.00	2618
MA-770 70' crank-up mast	T	2509.00	2258
MA-770MDP 70' crank up mast w/motor	T	3969.00	3572
MA-850MDP 85' crank-up mast w/motor	T	5349.00	4814

MA-SERIES ACCESSORIES

		Reg	Sale
CX-2M Coax arms (2) for MA-40		$ 53.00	
CX-3M Coax arms (3) for MA-550		79.00	
CX-4M Coax arms (4) for MA-770		132.00	119
CX-5M Coax arms (5) for MA-850		159.00	143
MAB-40 Hinged base for MA-40	T	359.00	323
MAB-550 Hinged base for MA-550	T	429.00	386
MAB-770 Hinged base for MA-770	T	519.00	467
MAB-850 Hinged base for MA-850	T	629.00	566
MAF-40 Raising fixture for MA-40		220.00	198
MAF-550 Raising fixture for MA-550	T	304.00	273
MAF-770 Raising fixture for MA-770	T	309.00	278
MAF-850 Raising fixture for MA-850	T	409.00	368
MARB-40 Rotor base accessory for MA-40	T	549.00	494
MARB-550 Rotor base accessory for MA-550	T	649.00	584
MARB-770 Rotor base accessory for MA-770	T	769.00	692
MARB-850 Rotor base accessory for MA-850	T	909.00	818

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UNADILLA (See W2AU)

UNIDEN (UNI)

HR-2600 25w 10m FM/SSB Xcvr	D*	$489.95	199.95

Unified Microsystems (UNM)

W9XT Contest card for IBM PC & compatible		$149.95	

Universal Towers (UNT)

4-30 4 sq ft wind load 30' alum tower	T	$335.00	302
9-30 9 sq ft wind load 30' alum tower	T	451.00	406
12-30 12 sq ft wind load 30' alum tower	T	593.00	534
21-30 21 sq ft wind load 30' alum tower	T	704.00	634
23-30 23 sq ft wind load 30' alum tower	T	932.00	839
35-30 35 sq ft wind load 30' alum tower	T	1050.00	945
4-40 4 sq ft wind load 40' alum tower	T	562.00	506
7-40 7 sq ft wind load 40' alum tower	T	706.00	635
9-40 9 sq ft wind load 40' alum tower	T	787.00	708
12-40 12 sq ft wind load 40' alum tower	T	932.00	839
15-40 15 sq ft wind load 40' alum tower	T	1042.00	938
21-40 21 sq ft wind load 40' alum tower	T	1157.00	1041
23-40 23 sq ft wind load 40' alum tower	T	1385.00	1247
4-50 4 sq ft wind load 50' alum tower	T	792.00	713
5-50 5 sq ft wind load 50' alum tower	T	900.00	810
7-50 7 sq ft wind load 50' alum tower	T	1013.00	912
9-50 9 sq ft wind load 50' alum tower	T	1126.00	1013
15-50 15 sq ft wind load 50' alum tower	T	1496.00	1346
16-50 16 sq ft wind load 50' alum tower	T	1614.00	1453
4-60 4 sq ft wind load 60' alum tower	T	1127.00	1014
6-60 6 sq ft wind load 60' alum tower	T	1382.00	1244
7-60 7 sq ft wind load 60' alum tower	T	1471.00	1324
9-60 9 sq ft wind load 60' alum tower	T	1577.00	1419
3-70 3 sq ft wind load 70' alum tower	T	1469.00	1322
4-70 4 sq ft wind load 70' alum tower	T	1805.00	1625
6-70 6 sq ft wind load 70' alum tower	T	1838.00	1654
7-70 7 sq ft wind load 70' alum tower	T	1922.00	1729
3-80 3 sq ft wind load 80' alum tower	T	1920.00	1728
4-80 4 sq ft wind load 80' alum tower	T	2293.00	2064
2-90 2 sq ft wind load 90' alum tower	T	2375.00	2138

UNIVERSAL - continued

		Reg	Sale
B-14 Base for tower		60.58	55
B-18 Base for tower		60.58	55
B-22 Base for tower		106.04	95
B-26 Base for tower		136.33	123
RFM-14 Flat roof mt for guyed tower		42.32	38
RFM-18 Flat roof mt for guyed tower		66.69	60
RFM-22 Flat roof mt for guyed tower		99.96	90
RFM-26 Flat roof mt for guyed tower		133.33	120
R-11 Rotor mount		30.27	27
R-14 Rotor mount		45.33	41
R-18 Rotor mount		60.58	55

SEE LITERATURE FOR CONFIGURATION OF TOWERS

11 Top 11" top tower section	T	113.66	102
14 Top 14" top tower section	T	143.22	129
18 Top 18" top tower section	T	259.72	234
14 Taper 14" taper tower section	T	126.00	113
18 Taper 18" taper tower section	T	226.00	203
22 Taper 22" taper tower section	T	337.00	303
26 Taper 26" taper tower section	T	453.00	408
11 Straight 11" straight tower section	T	112.00	101
14 Straight 14" straight tower section	T	126.00	113
18 Straight 18" straight tower section	T	226.00	203
22 Straight 22" straight tower section	T	337.00	303
26 Straight 26" straight tower section	T	453.00	408
HD35-40 35 sq ft wind load 40' alum tower	T	1616.00	1454
HD21-50 21 sq ft wind load 50' alum tower	T	1724.00	1552
HD9-60 9 sq ft wind load 60' alum tower	T	1808.00	1627
HD16-60 16 sq ft wind load 60' alum tower	T	2178.00	1960
HD21-60 21 sq ft wind load 60' alum tower	T	2295.00	2065
HD8-70 8 sq ft wind load 70' alum tower	T	2034.00	1831
HD12-70 12 sq ft wind load 70' alum tower	T	2519.00	2267
HD17-70 17 sq ft wind load 70' alum tower	T	2749.00	2474
HD21-70 21 sq ft wind load 70' alum tower	T	2864.00	2578
HD8-80 8 sq ft wind load 80' alum tower	T	2603.00	2343
HD9-80 9 sq ft wind load 80' alum tower	T	2716.00	2444
HD11-80 11 sq ft wind load 80' alum tower	T	3085.00	2777
HD12-80 12 sq ft wind load 80' alum tower	T	3090.00	2781
HD16-80 16 sq ft wind load 80' alum tower	T	3317.00	2985
HD4-90 4 sq ft wind load 90' alum tower	T	2710.00	2439
HD8-90 8 sq ft wind load 90' alum tower	T	3198.00	2878
HD11-90 11 sq ft wind load 90' alum tower	T	3656.00	3290
HD4-100 4 sq ft wind load 100' alum tower	T	3630.00	3267
HD8-100 8 sq ft wind load 100' alum tower	T	3884.00	3496
B-30 Base for HD tower		212.57	191
RFM-30 Flat roof mt for guyed tower		186.52	168
1-5/8SC Flange bearing		90.70	81
2-3/16SC Flange bearing		116.52	104
Top Plate Flange plate welded to top section		21.24	19

SEE LITERATURE FOR CONFIGURATION OF TOWERS

30 Taper 30" taper tower section	T	570.00	513
30 Straight 30" straight tower section	T	570.00	513
1-1/4" OD x 10 ft aluminum mast	T	30.27	27
1-1/2" OD x 10 ft aluminum mast	T	37.84	34
2" OD x 8 ft aluminum mast		45.41	41
2" OD x 16 ft aluminum mast	T	90.88	82

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VALOR (See PRO AM)

VANCO (VCO)

SWR-1 SWR/field strength meter	$ 36.14	19.95
SWR-2 SWR/power/field strength meter	50.15	29.95
SWR-3 Mini SWR meter	21.68	14.95

VAN GORDEN (VAN)

Hi-Q 1:1 balun	$ 14.95	
Hi-Q 4:1 balun	14.95	

VAN GORDEN - continued

		Reg	Sale
Antenna center insulator		6.95	
Antenna end insulator	each	3.95	
Dog bone type antenna insulator	each	.50	
NR-100 Nylon antenna guy rope	100 ft.	4.49	
NR-1,000 Nylon ant guy rope	1,000 ft.	43.95	
D-80 80m wire dipole antenna		31.95	
SD-80 Short 80m dipole		35.95	
D-40 40m wire dipole antenna		28.95	
SD-40 Short 40m dipole		33.95	
D-20 20m wire dipole antenna		27.95	
D-15 15m wire dipole antenna		26.95	
D-10 10m wire dipole antenna		25.95	
All Bander Dipole 160-10m (w/tuner) 135' ant		29.95	
Shorty All Bander 160-10m (w/tuner) 70' ant		39.95	
G5RV Flat-top 5-band 102' antenna w/cable		50.00	
N connector Type N connector for 9913		4.95	
450 ohm insulated ladderline	100 ft.	12.00	
450 ohm insulated ladderline	1,000 ft.	110.00	
8X-3ST 3' RG-8X coax/silver teflon PL259s		8.50	
8X-6ST 6' RG-8X coax/silver teflon PL259s		10.00	
8X-12ST 12' RG-8X coax/silver teflon PL259s		11.00	
8X-25ST 25' RG-8X coax/silver teflon PL259s		15.50	
8X-50ST 50' RG-8X coax/silver teflon PL259s		24.00	
8X-75ST 75' RG-8X coax/silver teflon PL259s		31.00	
8X-100ST 100' RG-8X coax/silver teflon PL259s		37.00	
213-3ST 3' RG-213 coax/silver teflon PL259s		11.00	
213-6ST 6' RG-213 coax/silver teflon PL259s		14.00	
213-12ST 12' RG-213 coax/silver teflon PL259s		18.00	
213-25ST 25' RG-213 coax/silver teflon PL259s		25.00	
213-50ST 50' RG-213 coax/silver teflon PL259s		38.00	
213-75ST 75' RG-213 coax/silver teflon PL259s		54.00	
213-100ST 100' RG-213 coax/silver teflon PL259s		72.00	

VIBROPLEX (VIB)

100 Original Presentation Super deluxe bug		$195.00	
105 Original Deluxe Bug		120.00	
110 Original Standard Bug		99.00	
115 VibroKeyer Deluxe Paddle		115.00	
120 VibroKeyer Standard Paddle		89.00	
125 Iambic Presentation Paddle		160.00	
130 Iambic Deluxe Paddle		115.00	
135 Iambic Standard Paddle		95.00	
140 EK-1 Iambic keyer w/paddle		145.00	
145 Brass Racer Iambic paddle		65.00	

VOCOM (VOC)

2m 5/8 wave telescopic whip **ant** w/BNC	Δm	$ 19.95	14.95

W2AU (Unadilla) (W2A)

W2AU 1:1 80-10m balun, lightning arrestor		$ 21.00	
W2AU Beam Balun, 1:1		21.00	
W2AU 4:1 80-10m balun, lightning arrestor		21.00	
W2DU-HF 1:1 1.8-30 MHz choke balun		23.00	
W2DU Beam Balun 40-10m 1:1 choke balun		23.00	
W2DU-VHF 1:1 30-250 MHz choke balun		23.00	
HA AN-sulator center insulator		8.00	
HE END-sulator end insulators	pair	4.00	
KW-80CW Reyco 80m CW ant traps	pair	44.00	
KW-80F Reyco 75m phone ant traps	pair	44.00	
KW-40 Reyco 40m antenna traps	pair	40.00	
KW-30 Reyco 30m antenna traps	pair	40.00	
KW-20 Reyco 20m antenna traps	pair	39.00	
KW-17 Reyco 17m antenna traps	pair	39.00	
KW-15 Reyco 15m antenna traps	pair	39.00	
KW-12 Reyco 12m antenna traps	pair	39.00	
KW-10 Reyco 10m antenna traps	pair	39.00	
W2AU/W2VS 5-band ant kit (use tuner)		75.00	

WABER AC OUTLET STRIPS (WAB)

3SP 3 outlet/breaker/switch/light	Δmv	$ 16.60	9.95
4S 4 outlet/breaker/switch	Δm	16.60	9.95
5 5 outlet w/breaker	Δm	16.60	9.95
6SP 6 outlet/breaker/switch/light	Δm	19.95	10.95
7S 7 outlet/breaker/switch	Δm	19.95	10.95
8 8 outlet w/breaker	Δm	19.95	10.95

WAHL (WAH)

7540 Cordless soldering iron kit	Dm	$ 34.95	29.95
7740 Quick charge cordless soldering iron kit		39.95	34.95

WAHL - continued

	Reg	Sale
7980 Butane soldering iron and torch	29.95	
7985 Butane iron/torch kit package w/case	54.95	49.95

WALNUT CREEK (WAL)

CICA 650 MB of current Windows shareware	$ 29.95	
Garbo 250 MB DOS + 150 MB Mac programs	29.95	
Giga Games 3,000 DOS & Windows games	39.95	
Ham QRZ US & Canada calls plus programs	29.95	
Hobbes Thousands of OS/2 applications	29.95	
Simtel 650 MB current DOS programs	29.95	

WELLER (WEL)

7200PK 75w soldering gun kit	$ 32.80	26.95
EC-1002-1 40w temp controlled solder stn	281.06	189.95
WP-25 25w professional soldering iron	37.06	
W-60P 60w temp controlled soldering iron	71.16	59.95
W-100PG Hvy duty 100w temp controlled iron	69.86	49.95
WTCPT 60w temp controlled soldering stn	167.12	109.95
WSTA3 Pyropen portable LP soldering iron	110.06	74.95
WST2 Pyropen Jr. portable butane iron	88.36	64.95

YAESU (YAE)

FT-1000 Xcvr w/ps/tuner/keyer/mic/XF-AB	3889.00	CALL
BPF-1 Dual bandpass filter; crossband rcv	177.00	164.95
TCXO-1 Temperature compensated xtal osc	229.00	209.95
XF-C 2.4 KHz SSB xtal filter (455 KHz)	149.00	139.95
XF-D 2 KHz SSB xtal filter (455 KHz)	149.00	139.95
YF-110C/XF-E 500 Hz CW xtal filter (455 KHz)	149.00	139.95
FT-1000D Dlx Xcvr w/BPF/TCXO/XF-ABCDE	4919.00	CALL
$100 coupon - FT-1000/FT-1000D thru 6/11/94		
DVS-2 Digital voice recording module	304.00	274.95
FIF-232C Interface for RS-232	109.00	
MD-1C8 Desk microphone	133.00	
SP-5 External spkr w/audio filter	160.00	149.95
LL-5 Phone patch unit for SP-5	139.00	129.95
XF-455MC 600Hz CW filter (455KHz); subrcvr	159.00	149.95
YF-110CN/XF-F 250 Hz CW xtal filter (455 KHz)	159.00	149.95
YH-77ST Open-air type stereo headphones	52.00	
FT-990DC Xcvr w/tuner & mic	2179.00	CALL
FP-25 Internal power supply for FT-990DC	349.00	319.95
FP-800 20A heavy duty ps for FT-990DC	309.00	279.95
XF-109C 500 Hz CW filter for FT-990DC	127.00	119.95
FT-990 Xcvr w/ps/tuner/mic/CW filter	2579.00	CALL
$100 coupon - FT-990/FT-990DC thru 6/11/94		
DVS-2 Digital voice recording module	304.00	274.95
FIF-232C Interface for RS-232	109.00	
MD-1C8 Desk microphone	133.00	
SP-6 External speaker w/filter	160.00	149.95
LL-5 Phone patch unit for SP-6	139.00	129.95
TCXO-2 Temp compensated xtal oscillator	199.00	189.95
XF-10.9M-202-01 2nd IF 2 KHz SSB filter	127.00	119.95
XF-455K-251-01 2nd IF 250 Hz CW filter	159.00	149.95
YH-77ST Open-air type stereo headphones	52.00	
2M/767 (FEX-767-2M) 2m mod; 767 ...Δmfv	269.00	249.95
6M/767 (FEX-767-6M) 6m mod; 767 ...Δmfv	269.00	249.95
430/767 (FEX-767-70B) 430-440 mod Δmwfv	349.00	319.95
440/767 (FEX-767-70A) 440-450 mod Δmwfv	349.00	319.95
SP-767P Speaker/patch for FT-767GX .Δmwf	136.00	129.95
FT-890 Xcvr/.1-30 MHz Rcvr w/mic	1439.00	CALL
ATU-2 Internal antenna tuner	270.00	249.95
FT-890/AT Xcvr/.1-30 MHz Rcvr/tuner/mic	1649.00	CALL
$100 coupon - FT-890//FT-890/AT thru 6/11/94		
FP-800 20A heavy duty power supply	309.00	279.95
DVS-2 Digital voice recording module	304.00	274.95
FC-800 External long wire auto tuner	499.00	429.95
FIF-232C Interface for RS-232	109.00	
FRB-757 External relay box	29.00	
MD-1C8 Desk microphone	133.00	
MH-1B8 Extra hand microphone	33.00	
MMB-20 Mobile mount	29.00	
SP-6 External speaker w/filter	160.00	149.95
LL-5 Phone patch unit for SP-6	139.00	129.95
SP-7 Mobile speaker	37.00	
TCXO-3 TCXO unit	99.00	
XF-455K-251-01 2nd IF 250 Hz CW filter	159.00	149.95
YF-100 2nd IF 500 Hz CW filter	124.00	119.95
YF-101 2nd IF 2.6 KHz SSB filter	159.00	149.95
YH-77ST Open-air type stereo headphones	52.00	
FT-840 Xcvr/SW Rcvr	999.00	CALL
$50 coupon - FT-840 thru 6/11/94		

YAESU - continued

FP-800 20A heavy duty power supply	309.00	279.95
FC-10 External coax fed auto tuner	379.00	349.95
FC-800 External long wire auto tuner	499.00	429.95
FIF-232C Interface for RS-232	109.00	
FM-747 FM unit	70.00	
MD-1C8 Desk microphone	133.00	
SP-6 External speaker w/filter	160.00	149.95
SP-7 Mobile speaker	37.00	
TCXO-4 TCXO unit	102.00	
YF-112A 6 KHz AM filter	124.00	
YF-112C 500 Hz CW filter	124.00	
YH-77ST Open-air type stereo headphones	52.00	
FT-747GX Xcvr/SW Rcvr/CW filter/mic Dmwfv	909.00	739.95
FP-757HD Heavy duty supply/fan/spkr	334.00	304.95
FP-700 Power supply	265.00	239.95
FAS-1-4R Remote antenna selector	129.00	119.95
FC-757AT Auto antenna tuner w/memory	530.00	479.95
E-767 Cable for FC-757AT w/FT-747GX	24.00	
FM-747 FM unit	70.00	
MD-1C8 Desk microphone	133.00	
MH-1B8 Extra hand microphone	33.00	
MMB-38 Mobile mounting bracket	20.00	
SP-767 Speaker w/audio filters	99.00	
TCXO-747 Increased freq stability unit	42.00	
FL-7000 Solid state amp w/auto ant tuner	2459.00	CALL
CT-11 Cable - FL-7000 to FT-890	19.00	
E-767 Cable - FL-7000 w/FT-767/990/1000	24.00	
FAS-1-4R Remote antenna selector	129.00	119.95
DC-8800 DC kit for FRG-8800 ...Dm	4.00	2.95
FRG-100B .1-30 MHz shortwave receiver	669.00	CALL
FM Unit-100 FM unit	47.00	
TCXO-4 TCXO unit	102.00	
YF-110C/XF-E 500 Hz CW xtal filter	149.00	139.95
YF-110CN/XF-F 250 Hz CW xtal filter	159.00	149.95
YA-30 1.8-30 MHz broadband dipole ant	248.00	229.95
YH-55 Lo-Z headphones	33.00	
YH-77 Lightweight headphones	30.00	
YS-60 1.8-60 MHz 2kw PEP wattmeter	133.00	124.95
YS-500 140-520 MHz 200w PEP wattmeter	106.00	
FT-650 100w 12/10/6m Xcvr w/ps	1859.00	CALL
DVS-2 Digital voice recording module	304.00	274.95
MD-1C8 Desk microphone	133.00	
SP-5 External spkr w/audio filter	160.00	149.95
LL-5 Phone patch unit for SP-5	139.00	129.95
XF-455M6 600 Hz CW filter	159.00	149.95
FT-736R 25w 2m/430 full dplx Xcvr/ps/mic	2149.00	CALL
AD-3 100w 2m/440 duplexer	52.00	
E-736 DC cable	13.00	
FEX-736-50 6m module	329.00	299.95
FEX-736-220 220 MHz module	349.00	319.95
FEX-736-1.2 1.2 GHz module	599.00	539.95
FIF-232C Interface for RS-232	109.00	
FTS-8 Encoder/decoder	58.00	
FVS-1A Voice synthesizer	37.00	
Keyer-B Electronic keyer unit	19.00	
MD-1C8 Desk microphone	133.00	
MH-1B8 Extra hand microphone	33.00	
SP-767 Speaker w/audio filters	99.00	
TV-736 1.2 GHz ATV converter	163.00	149.95
FT-690R Mk II 10w 6m FM/SSB Xcvr/TTP	839.00	CALL
FT-290R Mk II 25w 2m FM/SSB Xcvr/TTP	699.00	CALL
FT-790R Mk II 25w 430-450 FM/SSB/TTP	819.00	CALL
CSC-19 Soft case	21.00	
FBA-8 Holder for 9 C-cell nicads	42.00	
NC-26B Wall charger for FBA-8	13.00	
FTS-7A Encoder/decoder; current units	41.00	
MH-10E8 Hand microphone ...Dm	24.00	16.95
FT-5100 50/35w 2m/440 FM Xcvr/TTP mic	749.00	CALL
$25 coupon - FT-5100 thru 6/11/94		
FT-5200 50/35w 2m/440 FM Xcvr/TTP mic	789.00	CALL
FT-6200 35/10w 440/1.2GHz FM Xcvr/TTP	879.00	CALL
$25 coupon - FT-5200/FT-6200 thru 6/11/94		
DVS-3 Digital voice memory unit	144.00	134.95
FRC-4 DTMF pager unit	42.00	
FTS-22 CTCSS decode unit	58.00	
MH-27B8 Extra TTP microphone	57.00	
MW-1 Wireless remote control microphone	116.00	112.95
MMB-53 Mobile mtg bkt for MW-1	7.00	
SP-7 External speaker	37.00	

YAESU - continued

YSK-1L Sep kit w/18' cable; FT-5200/6200	59.00	
FT-712RHT/C8 35w 440 FM/TTP mic ...Dmwfv	497.00	309.95
FT-912RH 10w 1.2 GHz FM Xcvr w/TTP mic	709.00	CALL
AD-3 100w 2m/440 duplexer	52.00	
DVS-1 Digital voice memory module Δmwfv	109.00	29.95
FTS-12 Decoder; 212RH/712RH/912RH	58.00	
MH-15C8 Extra TTP microphone	54.00	
MH-15D8 Autodial TTP microphone	80.00	
FT-2400H 50w 2m FM Xcvr w/TTP mic	439.00	CALL
$50 coupon - FT-2400H thru 6/11/94		
FT-7400H 35w 440 FM Xcvr w/TTP mic	569.00	CALL
2400 Mic Cable 2' packet cable	9.00	
FRC-6 DTMF pager unit	42.00	
FTS-17A CTCSS decode unit	60.00	
MH-27A8J Extra TTP microphone	60.00	
SP-7 External speaker	37.00	
FT-2500M 50w 2m FM Xcvr w/TTP mic	439.00	CALL
FT-2200 50w 2m FM Xcvr w/TTP mic	459.00	CALL
FT-7200 35w 440 FM Xcvr w/TTP mic	579.00	CALL
$25 coupon - FT-2200/FT-7200 thru 6/11/94		
DVS-3 Digital voice memory unit	144.00	134.95
FTS-27 CTCSS decode unit	53.00	
MW-2 Wireless remote control microphone	138.00	129.95
MMB-53 Mobile mtg bkt for MW-2	7.00	
SP-7 External speaker	37.00	
SP-3 Small mobile speaker	21.00	
SP-4 Mobile speaker	30.00	

Accessories for FT-208R/708R

FNB-2A Nicad battery pack	$ 51.00	
YM-24A Speaker/microphone ...Dm	39.95	

Accessories for 09-series/03-series

FNB-4A 500ma 12v battery	$ 65.00	
FTS-6 Encoder/decoder; 09-series ...Dmf	56.00	
MMB-21 Mobile bracket ...Dm	16.00	
NC-9B Wall charger for FNB-3/3A ...Dm	14.00	
PA-3 Mobile adapter and charger ...Dm	28.00	
FT-26/25 2w 2m FM HT/batt/cgr	309.00	CALL
FT-26/27 5w 2m FM HT/batt/cgr	341.00	CALL
FT-76/25 2w 440 FM HT/batt/cgr	329.00	CALL
FT-530 2m/440 FM HT/batt/cgr/TTP	569.00	CALL
$25 coupon - FT-530 thru 6/11/94		
FT-815 2w 440 FM HT/batt/cgr/TTP ....Dmwfv	449.00	299.95
FT-416 2w black 2m FM HT/batt/cgr/TTP	415.00	CALL
FT-816 2w black 440 FM HT/batt/cgr/TTP	469.00	CALL
$25 coupon - FT-416/FT-816 thru 6/11/94		
CLIP-3 Belt clip	7.00	
CSC-50 Vinyl case; 415/416 w/FNB-25	21.00	
CSC-52 Vinyl case; 415/416 w/FNB-26/27	21.00	
CSC-53 Vinyl case; 26/76 w/FNB-25	21.00	
CSC-55 Vinyl case: 26/76 w/FNB-26/27	21.00	
CSC-56 Vinyl case; 530 w/FNB-25	21.00	
CSC-58 Vinyl case; 530 w/FNB-26/27	21.00	
EDC-5B DC adapter w/noise filter	23.00	
EDC-6 DC adapter; plug & wire only	6.00	
FBA-12 AA cell holder	21.00	
FNB-25 600ma 7.2v nicad battery	51.00	
FNB-26 1000ma 7.2v nicad battery	79.00	
FNB-27 600ma 12v nicad battery (5w)	79.00	
FTS-17A CTCSS encode/decode unit	60.00	
MH-12A2B Speaker/microphone	47.00	
MH-18A2B Compact lapel speaker/mic	39.00	
MH-19A2B Earpiece/microphone	43.00	
MH-29A2B LCD display spkr/mic; 530	105.00	
MMB-49 Mobile mounting bracket ...Dmwfv	18.00	
MMB-54 Mobile mtg bracket; FT-26/530	24.00	
NC-18B Wall charger for FNB-27	14.00	
NC-28B Wall charger for FNB-25/26	14.00	
NC-42 1 hour desk quick charger	104.00	
YH-2 Lightweight VOX headset w/mic	33.00	
FT-23R-17 2.5w 2m FM HT/FNB-17/cgr	299.00	CALL
FT-23R-12 5w 2m FM HT/FNB-12S/cgr	328.00	CALL
FT-33R 5w 220 FM HT/batt/cgr	349.00	CALL
FT-411E 2.5w 2m FM HT/batt/cgr/TTP	369.00	CALL
FT-811 2w 440 FM HT/batt/cgr/TTP ....Dmwfv	394.00	259.95
FT-911 1w 1.2 GHz FM HT/batt/cgr/TTP	529.00	CALL
$25 coupon - FT-411E/FT-811/FT-911 thru 6/11/94		
FT-470 2.3w 2m/440 FM HT/batt/cgr/TTP ..D*	499.00	354.95
$25 coupon - FT-470 until gone!		

YAESU - continued

	Reg	Sale
Accs for FT-23R/33R/73R/411E/811/470/911		
CLIP-1 Belt clip	$ 7.00	
CSC-24 Soft case; 23R w/FNB-11 .....Dm	19.00	2.95
CSC-28 Soft case; FT-23R w/FNB-12S	21.00	
CSC-35 Soft case; FT-411E w/FNB-17	21.00	
CSC-37 Soft case; FT-411E w/FNB-12S/14	21.00	
CSC-43 Soft case; FT-470 w/FNB-9/17	21.00	
CSC-45 Soft case; FT-470 w/FNB-12S/14	21.00	
CSC-48 Soft case; 23R w/FNB-17	21.00	
FBA-17 AA battery holder	22.00	
FNB-12S 600ma 12v (5w) battery	71.00	
FNB-14 1000ma 7.2v battery	71.00	
FNB-17 600ma 7.2v battery	52.00	
FTS-12 Encoder/decoder for FT-23R/33R/73R	58.00	
FTS-17A Tone squelch/pager; FT-411E	60.00	
FTT-4 DTMF (TTP) unit for FT-23R	51.00	
MH-12A2B Speaker/microphone	47.00	
MH-18A2B Compact lapel speaker/mic	39.00	
MH-19A2B Earpiece/microphone	43.00	
MMB-32A Mobile hanger; not for FT-470	14.00	
MMB-46 Mobile hanger for FT-470	15.00	
NC-18B Wall charger for FNB-12S	14.00	
NC-28B Extra wall charger for FNB-9/10/17	14.00	
NC-29 Desk quick cgr; FNB-12S/14/17	74.00	
NC-34B Wall charger for FNB-14	14.00	
NC-37 1-hour desk cgr; FNB-12S/14/17	117.00	
PA-6 Mobile DC adapter/cgr; FNB-9/10/14/17	27.00	
PA-7 Battery extension cable .....Δmwfv	33.00	9.95
YH-2 Lightweight VOX headset w/mic	33.00	
FT-11R 1.5w 2m FM HT/batt/cgr/TTP	369.00	CALL
FT-11R/HP 5w 2m FM HT/batt/cgr/TTP	389.00	CALL
FT-41R 1.5w 440 FM HT/batt/cgr/TTP	429.00	CALL
$25 coupon - FT-11R/FT-11R/HP//FT-41R thru 6/11/94		
CA-7 2 charging sleeves; NC-50/411E/470	23.00	
CA-8 2 charging sleeves; NC-50/416/530	23.00	
CA-10 2 charging sleeves; NC-50/11R/41R	16.00	
CSC-61 Soft case for FNB-33/38/FBA-14	21.00	
CSC-62 Soft case for FNB-31	21.00	
FBA-14 AA battery holder	21.00	
FNB-31 600ma 4.8v (1.5w) battery	53.00	
FNB-33 1200ma 4.8v (1.5w) battery	79.00	
FNB-38 600ma 9.6v (5w) battery	79.00	
FTS-26 CTCSS decoder	55.00	
MH-12A2B Speaker/microphone	47.00	
MH-18A2B Compact lapel speaker/mic	39.00	
MH-19A2B Earpiece/microphone	43.00	
NC-34B Wall charger for FNB-33	14.00	
NC-38B Wall charger for FNB-38	14.00	
NC-50 1-hour dual slot charger	103.00	
PA-10 Mobile drop-in charger	89.00	
VC-22 Headset w/VOX	58.00	
ANTENNA ROTORS		
G-500A 12 sq ft elevation rotor/8-wire	$299.00	CALL
$25 coupon - G-500A thru 6/11/94		
G-800S Med/hvy duty 450 degree 17sq ft/5-wire	359.00	CALL
G-800SDX Med/hvy duty 17sq ft/presets/5-wire	439.00	CALL
$25 coupon - G-800S/G-800SDX thru 6/11/94		
G-1000SDX HD 450 degree 23sq ft/presets/5-wire	539.00	CALL
$25 coupon - G-1000SDX thru 6/11/94		

YAESU - continued

	Reg	Sale
G-2700SDX HD 450 degree 34sq ft/presets/8-wire	1049.00	CALL
$25 coupon - G-2700SDX thru 6/11/94		
G-5400B Light/med 11sq ft az/el//2x8-wire	559.00	CALL
Sep Kit Separation kit for G-5400B	29.00	
GC-038 Mast clamp; 400/800/1000/5400B	27.00	
GC-048 Mast clamp; G-2700SDX	42.00	
GS-050 50mm thrust bearing; mast 1¼-2"	33.00	
GS-065 65mm thrust bearing; mast 1½-2½"	48.00	
GS-23 Interface; G-800/1000/2700SDX	345.00	299.95
GS-232 Interface for G-5400B	547.00	469.95

See BELDEN for rotor cable

ZENITH (ZEN)

	Reg	Sale
A-8477 75 ohm high-pass filter .....D*		9.95

zm Xpressions (ZMX)

What is your TNC doing? Book ..... $ 15.00

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ALINCO (ALI)

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- **$20 Coupon** - DJ-F1T/HP thru 6/19/94
- **$10 Coupon** - DJ-180T thru 6/19/94
- **$10 Coupon** - DJ-180TH thru 6/19/94
- **$20 Coupon** - DJ-580T thru 6/19/94
- **$30 Coupon** - DJ-G1T thru 6/19/94
- **$20 Coupon** - DR-130T thru 6/19/94
- **$20 Coupon** - DR-600T thru 6/19/94

Coupons are applied directly to your order. There is nothing you need to do to receive them.

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- **$20 Rebate** - DJ-F1T/HP & EBP-14N thru 6/19/94
- **$5 Rebate** - DJ-180T & EJ-15U thru 6/19/94
- **$5 Rebate** - DJ-180T & EMS-9 thru 6/19/94
- **$5 Rebate** - DJ-180TH & EJ-15U thru 6/19/94
- **$5 Rebate** - DJ-180TH & EMS-9 thru 6/19/94
- **$5 Rebate** - DJ-580T & EMS-8Z thru 6/19/94
- **$20 Rebate** - DJ-G1T & EDC-52 thru 6/19/94
- **$5 Rebate** - DR-130T & EJ-19U thru 6/19/94
- **$5 Rebate** - DR-130T & EJ-20U thru 6/19/94
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- **$5 Rebate** - DR-600T & EJ-7U thru 6/19/94

Rebate checks come directly to you from Alinco - you must mail to Alinco the rebate form and copy of invoices. Radio AND accessory must be purchased between May 9, 1994 & June 19, 1994, however, you can buy the radio first and the accessory later (before June 19, 1994) and still receive a check from Alinco.

For latest Coupons & Rebates, Specials, etc. Call Toll Free • 1-800-558-0411 or Check the AES® BBS • 1-414-358-3472

New Products...

ALINCO (ALI)

EDC-19 9.75' separation mounting kit	$ 39.00

HAL (HAL)

PCI-4000/M Multi-mode clover unit; IBM ....m	$795.00	699.95

MFJ (MFJ)

44X Scope tuning adapter; 1278 & others	$ 49.95	
306 Car radio SWL converter	79.95	74.95
323 Keep-it-up battery maintainer	59.95	
452 CW keyboard/keyer w/disp/keyboard	129.95	119.95
452X CW keyboard/keyer w/disp, no keyboard	99.95	89.95
498 Dlx CW keyboard/keyer w/disp/keyboard	179.95	169.95
498X Dlx CW keyboard w/disp, no keyboard	159.95	149.95
784 Super DSP filter	219.95	199.95
916 2m/440 duplexer	29.95	
1276 Packet/Pactor controller	159.95	149.95
1276T Packet/Pactor Turbo controller	249.95	229.95
1716 2m/440 duck for HT	16.95	
1717 Gain 2m/440 duck for HT	19.95	
1768 2m/440 beam antenna	49.95	

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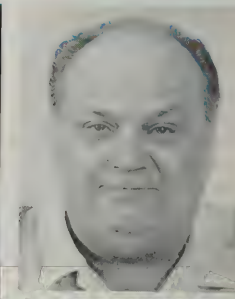

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AMATEUR ELECTRONIC SUPPLY® Inc.

AES® Store Locations	Phone	Toll Free	FAX
Milwaukee, WI 53223; 5710 W. Good Hope Road	(414) 358-0333	1-800-558-0411	(414) 358-3337
Wickliffe, OH 44092; 28940 Euclid Avenue	(216) 585-7388	1-800-321-3594	(216) 585-1024
Orlando, FL 32803; 621 Commonwealth Avenue	(407) 894-3238	1-800-327-1917	(407) 894-7553
Clearwater, FL 34625; 1898 Drew Street	(813) 461-4267		(813) 443-7893
Las Vegas, NV 89106; 1072 N. Rancho Drive	(702) 647-3114	1-800-634-6227	(702) 647-3412

PHONES

COBRA (COB)

		Reg	Sale
46/49 MHz CORDLESS PHONES			
CP-484	Ivory/room monitor/intercom .....Dm	$199.95	**89.95**
CP-486	Intenna/redial/tone/pulse .....Dw	109.95	**59.95**
CP-492	2-line/hold/page/vol control ....Dmwf	169.95	**89.95**
CP-711	Cellular style/selectable ch .....Dmf	129.95	**69.95**
CP-910	900MHz 100ch dig spread spectrum	399.95	**299.95**
TELEPHONE ANSWERING MACHINES			
AN-8526	Ans machine w/cordless phone Dmf	$229.95	**114.95**
AN-8534	Ans mach/rem/VOX/9# mem ph ..Dm	99.95	**49.95**
AN-8560	Ans machine w/personal memo ...Df	69.95	**32.95**
AN-8563	Ans machine w/microchip .....Dm	89.95	**40.95**
AN-8566	Ans machine w/9# mem ph ...Dmwf	129.95	**61.95**

SCANNERS & MONITORS

Antenna Specialists (ASP)

MONR1	H or U low profile roof mt monitor ant .	$ 23.50
MON-9	H & U magnet mt monitor antenna	35.25
MONR31	L/H/U gain ground plane base ant ..	55.25

BMI (BMI)

Nitelogger	Automatic recorder activator	$ 69.95
RC-1A	Impedance matching patch cord	19.95

CHANNEL MASTER (CHA)

5094A	4-band base Monitenna ant w/50' coax .	$ 44.99	**39.95**
5095A	Kit w/5094A ant, 5' tri-mast, 50' coax	55.99	**49.95**

COBRA (COB)

SR-11	10 ch prog pocket scanner .....Dmf	$219.95	**109.95**
SD-1E	Eastern U.S. frequency book .....Δmf	14.95	**7.95**

GROTHE (GRO)

VS-2	Emergency vehicle siren	$ 99.00	**89.95**
VS-3	Volunteer vehicle PA/horn w/spkr	159.00	**129.95**
VS-4	P/A emergency vehicle siren w/spkr	169.00	**139.95**

JBRO (JAB)

JB-1000	Battery for Regency HX-1000/1200 .	$ 30.00

MAXON (MAX)

WX-3	Weather receiver w/alert & ps	$ 59.95	**39.95**

Monitor America (MON)

Monitor America	Scanner frequency book	$ 24.95

OFFICIAL (OFF)

Aeronautical	Frequency Directory	$ 24.95
Maritime	Frequency Directory	24.95

UNIDEN BEARCAT (UNI)

BC-001	RF preamp for BC-590XLT .....Δmf	$ 13.40	**7.95**
BC-147XLT	16 ch prog scan/instant WX Dmwfv	169.95	**99.95**
BC-148XLT	16 ch prog scan/WX alert .Dmwfv	179.95	**89.95**
BC-560XLT	16 ch mobile prog scanner ....Dfv	179.95	**79.95**
BC-350A	50 ch prog/service search w/AC ps .	199.95	**129.95**
BC-560XLA	16 ch prog scanner w/AC ps	169.95	**119.95**
BCT-2	Pre-prog warning scanner/AC ps	269.50	**169.95**
BC-700A	50 ch prog/svc search/800/AC ps ...	299.95	**189.95**
BC-760XLT	100 ch prog/svc search/800/AC ps	379.95	**239.95**
BC-002	CTCSS tone board; BC-760XLT	62.99	
BC-003	Switch box for BC-002	10.70	
BC-004	RF preamp for BC-760XLT	27.80	
BC-855XLT	50 ch prog scanner w/800 MHz ...	319.95	**179.95**
BC-890XLT	200 ch 956 MHz scanner/WX alert	439.99	**269.95**
BC-002	CTCSS tone board; BC-890XLT	62.99	
BC-8500XLT	500 ch 25MHz-1.3GHz/WX alert	669.95	**419.95**
BC-005	CTCSS tone board; BC-8500XLT	68.00	
BC-55XLT	10 ch prog pocket scanner	179.95	**119.95**
AD-100	AC adapter/batt cgr; BC-50/55	17.70	
PS-001	DC power cord; BC-50/55XLT	5.95	
VC-001	Carrying case; BC-50/55XLT	9.00	
BC-65XLT	10 ch prog pocket scanner .....Dm	189.95	**99.95**
BC-70XLT	20 ch prog pocket w/batt .....Dm	249.95	**149.95**
AD-70	Extra charger for BC-70XLT	16.35	
BP-70	Extra battery for BC-70XLT	27.80	
UA-502	Cig power cord for BC-70XLT	11.25	
BC-100XLT	100 ch prog pocket w/air ..Dmwfv	299.95	**149.95**
BC-200XLT	200 ch prog pocket w/800 MHz ...	419.95	**249.95**
AD-140	Extra charger; BC-100XLT/200XLT .	18.24	
BP-200	Extra battery; BC-200XLT	32.82	
BP-205	Extra battery; BC-100XLT	37.23	
PS-001	DC power cord; BC-100XLT/200XLT	5.95	
Diamond **RH-77CA**	15" rubber gain ant	32.95	**29.95**
BC-120XLT	100 ch prog pocket w/aircraft	259.95	**159.95**

UNIDEN - continued

		Reg	Sale
BC-220XLT	200 ch prog pocket w/800 MHz ...	439.95	**259.95**
SC-150B	100 ch black sport pocket/800 MHz	349.95	**219.95**
BC-2500XLT	400 ch poc/25MHz-1.3GHz Dmwfv	669.95	**399.95**
BP-2500	Extra battery; BC-2500XLT	39.95	
FB-E	Eastern U.S. frequency book .....Dm	14.95	**9.95**
NPD-001	National frequency book	14.95	
RFD-001	IN/IL/KY/OH/MI/WI freq book	14.95	

RADAR DETECTORS

BEL (BLT)

956W	3-band wideband Ka detector .....Dm	$299.95	**99.95**
966STW	3-band wideband Ka detector ....Dm	459.95	**199.95**
966W	3-band wideband Ka detector .....Dm	379.95	**149.95**
LA-132	Laser detector .....Δm	129.95	**59.95**

COBRA (COB)

RD-300	3-band narrow band detector ..Dmwf	$ 95.95	**49.95**
RD-302	3-band wide band detector .....Dmwf	129.95	**69.95**
RD-304	3-band wide band detector .....Dmwf	179.95	**89.95**
RD-306	3-band wide band detector .....Dmf	189.95	**109.95**
RD-2110	Super heterodyne detector .....Dm	84.95	**49.95**
RD-3170	Deluxe superhet detector .....Dm	299.95	**89.95**
RD-4120	Super heterodyne detector .....Dmw	209.95	**59.95**
RD-6000	Solar powered radar detector ....Dm	319.95	**99.95**
LD-200	Laser detector	79.95	**69.95**
RDL-412	Radar/laser detector	239.95	**159.95**
RDL-512	Radar/laser detector	259.95	**179.95**

LAND MOBILE

COURIER (COU)

Procom*	2w VHF FM hand-held/batt/cgr	$199.95	**139.95**
ANT-2	Extra BNC flexible antenna	12.00	**9.95**
AUC-12	Cig lighter charger adapter	12.00	**9.95**
CAT-12	Leather carrying case	22.50	**19.95**
CHB-7	Extra AC battery charger	6.50	**5.95**
RB-7	Extra nicad battery pack	32.00	**29.95**
RSM-1	Speaker/mic	37.50	**32.95**
	*Available in one of three frequencies:		
	Frequency **A** (red) - 151.625 MHz (itinerant)		
	Frequency **B** (blue) - 154.570 MHz		
	Frequency **C** (green) - 154.600 MHz		
M-54	5w 4ch VHF FM hand-held/batt/cgr/151.625	299.95	**199.95**
U-22*	2w 2ch UHF FM hand-held/batt/cgr	279.95	**189.95**
	*Available in one of five frequencies:		
	Frequency **A** (white) - 462.575 MHz		
	Frequency **B** (black) - 462.625 MHz		
	Frequency **C** (orange) - 462.675 MHz (REACT)		
	Frequency **D** (brown) - 464.500 MHz (business radio svc)		
	Frequency **E** (yellow) - 464.550 MHz (business radio svc)		

ICOM (ICO)

IC-H18	16 ch 5w 148-165 MHz prog HT ...Dm	$819.00	**349.95**
IC-U12	12 ch 2.5w 450-460 MHz diode HT .Dm	499.00	**199.95**
IC-U12/tone	12ch 2.5w 450-460 diode/tone Dm	583.00	**229.95**
IC-U18	16ch 5w UHF HT; 450-460 or 460-470 ..Dm	849.00	**349.95**
BM-70	Desk charger; H-18/U-18 .....Δm	179.00	**49.95**
UT-14	Tone unit .....Dm	115.00	**29.95**
IC-U16	16 ch 2.5w UHF keyboard HT .....Dm	732.00	**469.95**
IC-125	5 ch 25w VHF diode mobile .....Dm	611.00	**299.95**
IC-V200	12 ch 25w 148-160 prog mobile Dm	700.00	**299.95**
IC-U400	16 ch 35w UHF keyboard mobile Dm	882.00	**599.95**
A-2	5w PEP synthesized aircraft handheld	629.00	**499.95**
A-21	5w PEP Navicom Plus aircraft handheld ..	730.00	**549.95**

MAXON (MAX)

MX-49FX	5 ch 49 MHz ear mic Xcvr	$ 89.95	**59.95**
MX-49HX	5 ch 49 MHz euro-design headset Xcvr	89.95	**49.95**
MX-49HXH	Intercom headset; MX-49HX Δm	29.95	**19.95**
MX-49SX*	49 MHz euro-design headset Xcvr	59.95	**29.95**
	*Available in channels **A**, **B**, & **E**; limited qty's in channel **D**		

RANGER (RAN)

RCI-1000*	1w mini VHF FM hand-held/batt/cgr .	$189.95	**129.95**
BT-10	Extra nicad batteries	29.95	**24.95**
DG-10	Desk charging stand (use wall cgr) .	14.95	
LC-1000	Leather case	24.95	**19.95**
MT-17	CTCSS encoder/decoder	54.95	**49.95**
SRA-106A	Speaker/mic	44.95	**39.95**
	*Available in one of three frequencies:		
	Frequency **A** (red) - 151.625 MHz (itinerant)		
	Frequency **B** (blue) - 154.570 MHz		
	Frequency **C** (green) - 154.600 MHz		

MARINE VHF FM RADIO

ICOM (ICO)

M-2	5w synthesized marine hand-held	$659.00	**359.95**
M-5	5w synth hand-held w/9 memories	725.00	**399.95**
M-11	6w synth splash resistant hand-held ...	721.00	**399.95**
CA-1	Extra flexible antenna	20.00	
RB-1	Vinyl waterproof radio bag	39.00	
M-56	25w synth mobile marine Xcvr	681.00	**379.95**
M-810*	150w fiber optic scanning SSB marine Xcvr	3544.00	**2579**
	*Special order		
GP-22	GPS unit .....†	1000.00	**499.95**

MOTOROLA (MOT)

H5057R	25w basic VHF marine Xcvr .....Δm	$379.00	**199.95**
H5058R	25w dlx VHF marine Xcvr .....Δmw	549.00	**299.95**
H5059R	25w VHF marine w/scrambler* .Δmf	869.00	**449.95**
	*Requires munitions license to export		
HSN9690	Hailer speaker; H5058R/5059R Δm	40.00	**34.95**
H5111	5w VHF marine hand-held .....Δmwf	639.00	**349.95**

RANGER (RAN)

RCI-6060	25w VHF marine Xcvr w/scan	$329.95	**179.95**
RCI-7000	5w 88 ch VHF marine hand-held ...	289.95	**159.95**
RCI-9000	5w 90 ch VHF marine hand-held ...	349.95	**199.95**

UNIDEN (UNI)

MC-635	25w 90 ch VHF marine Xcvr w/scan .	$309.99	**149.95**
MC-795	25w 90 ch VHF marine Xcvr w/prog ..	405.99	**179.95**
HH-978XL	5w 90 ch VHF marine hand-held ...	279.99	**139.95**
HH-979	5w 90 ch marine hand-held/scan	349.99	**159.95**

LARSEN (LAR)

PO-150-SBK	4' 3 db mast mounted ant ..Δm	$ 53.80	**39.95**

SHAKESPEARE (SHA)

399-1	6 db, 9' 6" 2-piece ant, less mount	$182.95	**89.95**
497	6 db, 8' antenna, less mount	81.95	**49.95**
5202	6 db ant w/chrome ferrule, less mt	123.95	**69.95**
5206-C	Economy 8' ant w/chrome ferrule, no mt .	55.95	**39.95**
366H	Chrome zamac ratchet mount	38.95	**24.95**
495	White plastic lift & lay mount	19.95	**14.95**
420	3 db, 5' ant w/fold-down mount	89.95	**49.95**
420-M-2	3 db, 5' mast mount antenna	107.95	**59.95**
5204-8	Combo CB/VHF marine 8' antenna	179.95	**89.95**
390	23' 2-piece SSB antenna, less mt .....T	172.95	**89.95**

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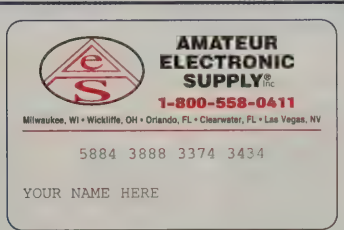

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CLOSEOUTS & SPECIALS

ALINCO DJ-162TD (A) • 2m FM handheld – receive covers 130-174 MHz (mod. for 118-136MHz aircraft receive and MARS/CAP transmit). 2.5W out; 5W with opt. battery or 12V. Keypad, 20 memories, autodialer, CTCSS, DTMF encode, DSQ paging. 5⅜" x 2¼" x 1¼", ¾ lb.. **$199.95**

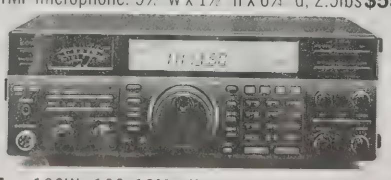
YAESU FT-470 (B) • 2m/440MHz, 2.3w, FM handheld. 411/811 Simultaneous receive on both bands, 21 memories for each band. 6½"h x 2¼"w x 1½"d, .88 lbs........... **(after Coupon) $329.95**

YAESU FT-815 (C) • 2W 440MHz FM handheld. Dual VFOs, 41 tunable memories. DTMF paging and coded squelch, DTMF autodialer, CTCSS encode/decode, VOX, battery saver and automatic power off. 2⅛"w x 5¾"h x 1⅜"d, 12½ oz........ **$299.95**

ICOM IC-P3AT (D) • 220MHz HT........ **(after Coupon) $279.95**

ALINCO DR-592T (right) • 45W 2m/35W 440MHz dual-band transceiver Extended receive, simultaneous receive, crossband repeat, remote control mic, multiple scanning capabilty, detachable front panel. 5¾"w x 2"h x 7"d, 3.3lbs........ **$469.95**

KENWOOD TM-732A (left) • Compact 50W 2m/35W 440MHz dual-bander. Extended receive 118-174MHz,.simultaneous dual channel watch, 51 memories, multiple scanning capabilty, DTMF microphone. 5½"w x 1½"h x 6¼"d, 2.5lbs **$559.95**



IC-737 • 100W, 160-10M all-mode with 500kHz-30MHz receiver, built-in auto antenna tuner, electronic keyer, autoantenna selector. Full QSK. Keypad frequency entry and band selection, 101 memories, scanning. Double band stacking register, PBT and notch, RIT and ΔTX. Speech compressor, hand microphone. 13" x 4½" x 11¼", 18 lbs.**(after Coupon) $1269**

SONY ICF-SW800 World Band Receiver (right) • Comes with three plug-in memory cards with 60 pre-programmed station presets - VOA, BBC, DW, etc. plus a clock card and blank card for user programming. Covers 3700–17.9MHz AM and FM. Tuning via: keyboard. 4¾"h x 7½"w x 1¼"d, 1.2 lb **$89.95**

SONY ICF-SW15 Compact Portable (left) • Covers AM Broadcast and 7 SW bands–49/41/31/25/19/16 & 13 meters. Dual conversion with bandspread tuning and positive soft touch power/band controls. Full range 3" speaker, tone control. 6½"w x 4"h x 1⁷⁄₁₆"d, 14 oz.................................. **$79.95**

UNIDEN HR-2600 10m Transceiver

AES has sold 1000's of these radios! They provide loads of fun on 10 meters operating Base or Mobile for local communications as well as occasional worldwide DX. Participate in Club Events, Nets, Repeaters and Emergency Communications.

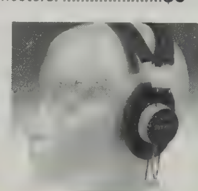
- ✔ **BAND:** 10 meters only; 28.0 to 29.7 MHz
- ✔ **MODES:** FM • SSB • CW • AM
- ✔ **POWER:** 25W SSB/CW PEP, 10W AM/FM
- ✔ **FEATURES:** • Selectable step digital VFO tunes with knob, switches or up/down buttons on microphone.• Multi-function LCD display • Scan mode • Noise blanker • RIT • automatic squelch • SWR indicator • 100kHz offset for repeater operation more! • 2⅜"h x 7¼"w x 9¾"d • 13.8 VDC @ 5A

Miscellaneous Closeouts

ALINCO DJ-560T/A • 2m/440 FM HT	$299.95
ALINCO DR-119T • 45w 2m FM Xcvr	344.95
AZIMUTH GC-24 • Large LCD 24-hour clock	29.95
COBRA RD-3170 • Superhet radar detector	89.95
COBRA RD-4120 • Superhet radar detector	59.95
COBRA RD-6000 • Solar radar detector	99.95
DRSI PCPA-3 • Serial packet adapter	79.95
ICOM DM-10 • Multimeter	19.95
ICOM IC-H18 • VHF 5w 16 ch Business HT	349.95
ICOM IC-U12 • UHF 2.5w 12 ch Business HT	199.95
ICOM IC-U12/Tone • UHF 2.5w 12 ch Business HT	229.95
ICOM IC-U18 • UHF 5w 16 ch Business HT	349.95
ICOM IC-U400 • UHF 35w 16 ch Business Xcvr	599.95
ICOM IC-V200 • VHF 25w 12 ch Business Xcvr	299.95
ICOM IC-02AT/HP • 5w 2m FM HT	239.95
ICOM IC-2SRA • 2m FM HT/25-905 MHz Rcvr	499.95
ICOM IC-4SAT • 440 FM HT	389.95
ICOM IC-4SRA • 440 FM HT/25-905 MHz Rcvr	489.95
ICOM IC-12GAT • 1.2 GHz FM HT	379.95
ICOM IC-24AT • 2m/440 FM HT	369.95
ICOM IC-125 • VHF 25w 5 ch Business Xcvr	299.95
ICOM IC-228H • 45w 2m FM Xcvr	359.95
ICOM IC-1201 • 10w 1.2 GHz Xcvr	499.95
KENWOOD BC-7 • Desk charger	49.95
KENWOOD CD-10 • Call sign display	29.95
KENWOOD TH-47A • 440 FM HT	249.95
MFJ 484C • Memory keyer	89.95
SONY IPS-360 • GPS receiver	499.95
UNIDEN BC-65XLT • 10 ch prog pocket scanner	99.95
UNIDEN BC-70XLT • 20 ch prog pocket scanner	149.95
UNIDEN BC-100XLT • Pocket scanner w/aircraft	149.95
UNIDEN BC-148XLT • 16 ch scanner w/WX alert	89.95
UNIDEN BC-2500XLT • Pocket scanner	399.95
YAESU DVS-1 • Memory module	29.95
YAESU FT-712RHT/C8 • 35w 440 FM Xcvr	309.95
YAESU FT-747GX • HF Xcvr	739.95
YAESU FT-811 • 440 FM HT	259.95

Most Close-outs Available in Milwaukee only

ZENITH A-8477 High-pass filter
Protects TV sets from 6–160M interference. More than 45dB attenuation at 52 MHz and lower. 75Ω with TV type-F connectors. **$9.95**



HY-GAIN 610-1 • Adjustable soft, cushioned earphones Blue and white vinyl, 600Ω Impedance – works fine with most radios. 54" straight cord with1/4" plug.. **$9.95**

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Orlando, FL 32803; 621 Commonwealth Avenue	(407) 894-3238	1-800-327-1917	(407) 894-7553
Clearwater, FL 34625; 1898 Drew Street	(813) 461-4267		(813) 443-7893
Las Vegas, NV 89106; 1072 N. Rancho Drive	(702) 647-3114	1-800-634-6227	(702) 647-3412

maxon SYSTEMS INCORPORATED

49 MHz Personal Communicators

Low Power • 1/4 mile average range • No license required

Dual conversion superhet receiver provides crisp, clear voice transmission. All units are compatible - two or more can be used for group communications. Voice activated (VOX) lets you transmit when you talk, or use the bypass switch for push-to-talk (PTT). Volume and mic sensitivity controls prevent outside noise from triggering the VOX.

MAXON MX-49SX (left) • Single-channel–features a lightweight adjustable headset with retractable whip antenna. indicator, boom microphone with windscreen and battery charger jack. Range up to 1/4 mile. Requires two "AA" regular or rechargable batteries . 5" x 2½" x 1", 9 oz. **$29⁹⁵**

MX-49FX (right) • 5 channels–Features an earphone/microphone that that picks up voice vibrations from the ear canal for transmit, and also provides receive audio. Built-in antenna gives up to 1/8 mile range and will not interfere with helmets. Includes remote PTT button and channel selector; Requires three "AA" batteries. 5½" x 3" x 1", 6 oz........ **$59⁹⁵**

MX-49HX (top) • 5-Channels–ideal for motorcycling and snowmobiling, etc. Helmet-adaptable headset has a whip antenna and boom microphone with windscreen. VOX operated or PTT with on-unit or remote switch. Front mounted off/on/volume, VOX sensitivity control and click detent channel selector. Jacks for optional passenger intercom headset. Requires three "AA" batteries. 3" x 5½" x 1", 6½ oz **$49⁹⁵**

Low Power VHF & UHF Handhelds

Ideal for for short range communications at construction sites, in factories, or security, etc.

COURIER PROCOM (A) • **VHF**–2W. Crystals installed for one of the frequencies listed below. Rechargeable nicad battery, charger, antenna. 7"h x 2½"w x 1¾"d 16 oz. **$139⁹⁵**

COURIER PROCOM M-54 (B) • **VHF**–5W, 4 channels, comes with 151.625MHz. 5¼ "h x 2⅜"w x 1½"d 15 oz......................... **$199⁹⁵**

COURIER PROCOM U-22 (C) • **UHF**–2W, 2 channels, includes of the frequencies below. 7"h x 2½"w x 1¾"d 16 oz...... **$189⁹⁵**

RANGER RCI-1000 (D) • **VHF**–mini-sized, 1W output, 2 channels. Includes a set of crystals installed for one of the frequencies listed below, rechargeable nicad battery and AC charger, flexible antenna. 4⅞"h x 2½"w x ⅞"d, 12 oz.... **$129⁹⁵**

Available Frequencies . . .

VHF • **151.625** (itinerant), **154.570 or 154.600MHz**

UHF • **462.575, 462.625, 462.675, 464.500 or 464.550MHz**

ICOM Marine

ICOM M-2 • Thumbwheel frequency selection of 78 U.S. and International channels, 4 weather channels, and 4 aux. priority channels. 5W. 6"h x 2½"w x 13¼ "d, 1½ lbs.................. **$359⁹⁵**

ICOM M-5 • Keyboard entry and control of all U.S.and International marine channels and 10 weather channels. Scanning; 10 memories; Dual watch; Instant Channel 16; 5 Watts output. May be connected directly to 12V DC to extend operation.7 "h x 2⅝"wx 1¼ "d, 1.3 lbs **$399⁹⁵**

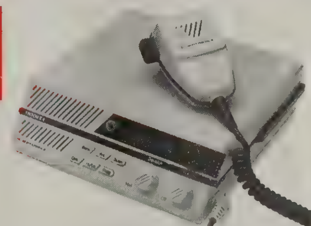
ICOM M-11 • 6 Watts, frequency synthesized with 78 channel capacity. 8¼"h 2⅝"w x 1⅜"d **$399⁹⁵**

ICOM M-56 • 25/1W. All U.S. and International channels, 10 Weather channels. 20 memories, scanning with lockout. Dual watch simultaneously monitors channel 16 and one other. Instant channel 16. 5½ x 2¼" x 6⅛"d, 2.4 lbs.............. **$379⁹⁵**

ICOM M-810 • 150W, fiber-optic SSB marine radio .**$2579⁰⁰**

Motorola Marine

TRITON Series



H5057R Basic TRITON II • 25W output, switchable to 1W; All VHF Marine Channels - US, International & Canadian + All Weather Channels; Instant Channel 16 and Weather; Reversible tilt-face Front Control Panel and Microphone; Rotary Channel Selector; LCD Display; Mounting Bracket and Hardware ......CLOSEOUT **$199⁹⁵**

H5058R TRITON II+ and (IIC) • Additions: built-in Loudhailer capability, programmable channel scan, programmable channel bank, dual watch.............................. CLOSEOUT **$299⁹⁵**

H5059R TRITON IIC • Additions: built-in analog voice scrambler* with up to 300 different user programmable codes. for security of transmissions **Note:** Scrambler requires a Munitions License to export .... CLOSEOUT **$449⁹⁵**

ICOM Land Mobile

IC-U100 UHF Mobile • 450–480MHz; 35W; 16 Channels with Programmable tx and rx CTCSS Tones; LCD readout; Fully Synthesized; Scanning, with or without Priority. Requires 13.8V DC @ 12A. 2"h x 6¾"w x 10⅓"d................. CLOSEOUT **$599⁹⁵**

IC-H16 VHF Handheld • 148-174MHz; 3W, 5W *optional*; 16 Channels with Programmable transmit and receive CTCSS Tones; LCD readout; Fully Synthesized; Scanning, with or without Priority; DTMF. Battery pack, flexible antenna and belt clip. 8"h x 2¾"w x 1½"d, 1.3 lbs .... CLOSEOUT **$429⁹⁵**

IC-U16 UHF Handheld • Looks like H-16 (left), and same except. 450-490MHz; 2.5W, 5W optional..... CLOSEOUT **$469⁹⁵**

RANGER Marine

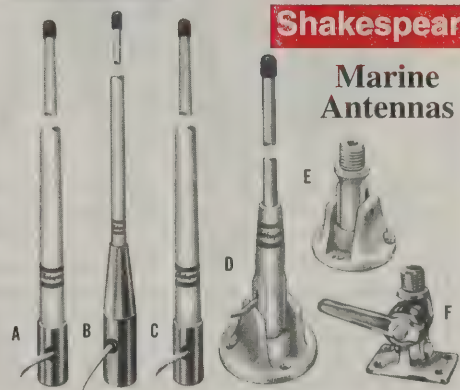
RANGER RCI-6060 • Keypad entry, covers all U.S. and International channels +10 weather channels. All channel scanning, direct access to channel 16 and dual watch mode. Back-lit LCD display, power Up/Down mic switch and external speaker jack. Power: 25W (High), 1W (low). Weather resistant housing, flush mounts. 3"h x 7½ "w x 8¼"d, 2 lb **$179⁹⁵**

RANGER RCI-7000 (left) • Digital thumbwheel selection of all U.S. and International channels + 8 weather channels. Direct channel 16 access , dual watch mode. Power: 5W (high) 1W (low). External speaker jack. Rechargable battery pack/charger included. 7¼"h x 2½"w x 1½"d..**$159⁹⁵**

RANGER RCI-9000 (rt.) • All features of the RCI-7000 but keypad entry and-including LCD display, 10 wx channels, and memory scan..........**$199⁹⁵**

Shakespeare

Marine Antennas



5202 (A) • Collinear-phased 5/8-wave elements. 6dB gain. 8 ft. long, handles 50W. DC grounded. Chrome-plated brass ferrule. 20 ft. coax cable with connector. **$69⁹⁵**

497 (B) • Collinear phase 5/8-wave elements. 6 db gain. 8 ft. long, handles 50W - *not* DC grounded. Smaller diameter absorbs flex. 20 coaxial cable with connector............... **$49⁹⁵**

5206-C (C) • Economy model. End fed, 8 ft. long, 6dB gain. Handles 50W, DC grounded. 15 ft. coax cable w/ connector**$39⁹⁵**

420 (D) • Center-fed 1/2-wave coaxial sleeve model. 3dB gain, 5 ft. long. Polycarbonate lift and lay deck mount with leveling plate, hardware & 20 ft coax cable w/ connector.**$49⁹⁵**

495 (E) • Lift and lay polycarbonate deck mount **$14⁹⁵**

366H (F) • Rachet mount with handle for deck or bulkhead mounting. Has 9/32" hole for Loran cable. Standard 1"-14 male threads. Chrome plated zamac **$24⁹⁵**

ICOM Aircraft & GPS

ICOM A-21 NAVICOM PLUS VHF Air Band HT • 760 channels, 10 WX and 20 memory channels. Programmed scan, memory scan and lock output. 5W output. Instant 121.5MHz **NAV features:** 200 ch., VOR nav with CDI, radial heading to/from VOR station, auto bearing set Semi-duplex–combines VOR/COM operation. 2½"w x 7¾"h x 1½"d, 1.4 lbs. **$549⁹⁵**

ICOM GP-22 GPS Receiver (right) • Fast and accurate positioning worldwide! Also, instant navigation, , course and speed over ground, cross track error, ETA, bearing and range to a waypoint and more! 2⅝" x 1⅛" x 5⅛", 3½ oz........ **$499⁹⁵**

Clocks for the Hamshack

BMI

BMI 972A (left) • Battery operated 12-hour time quartz controlled clock with 12" dial and sweep second hand. Black textured case and clear glass crystal. Uses 1 (size AA) battery. 14" dia. x 1¾" d. Looks good in shack! **$37.95**

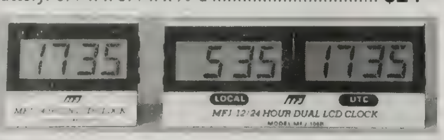
BMI 973A (right) • 24-hour version **$49.95**

Model 972AD
14" diameter 12/24 hour format wall clock
$39.95

MFJ

MFJ-105B 24 Hour Quartz Wall Clock (left) • Handsome black, 10" diameter face, sweep second hand. Uses single "A" battery, not included **$19.95**

MFJ-112 Dx'ers World Map Clock and Calendar Latest electronic and display technology shows a world map with 25 major world cities selectable by pushbutton. 12-hour time format with alarm feature. Large 1/2" LCD readout shows: Time, Month and Day in 24 world time zones. Includes tilt bracket and long life lithium battery. 5¼"w x 3¼"h x ⅝"d **$24.95**



MFJ Small 24-hour Clocks • Two models–a Dual Clock with separate UTC and local time displays, and a Single Clock with 24-hour time only. Heavy brushed aluminum frame, 5/8" high LCD numerals, and sloped face. Flashing seconds colon, battery included.

MFJ-107B • Single Clock, 2¼"w x 1"h x 2"d **$9.95**

MFJ-108B • Dual Clock, 4¼"w x 1"h x 2"d **19.95**

Azimuth

GC24 • Giant-Size digits– no more squinting! This clock features an amazing new "see-thru" LCD 3⅛"w x 2¼"h with BIG floating digits that are over 1¾" high. Sets in nice 4½"h brushed black metal stand. Battery included ....**CLOSEOUT $29.95**

NAVAL

HTS-2 Audio Booster Speaker Improves audio from HT's, Walkman, etc with a 10dB audio amplifier and 3½" speaker. Shuts off automatically if unit is squelched for more than 10 seconds, turns back on when the channel is active. Requires 4 AA batteries, or 5-15VDC. Has built-in NiCad charger. 5 ft. audio cord with plug and stereo to monaural converter 2¼"w x 4½"h x 2½"d, 1 lb **$29.95**

ASTRON Power Supplies

The alternative to more costly "matching" power supplies

Features: 105-125V AC input/13.8V DC output; internally adjustable from 11-15V • Electronic regulation with fold-back current limiting and crowbar overvoltage protection • Heavy-duty heat sink • 3-wire power cord • One-year warranty • Made in U.S.A.

Separate voltage and ampere meters on RS-20M, 35M, 50M and 70M. Separate voltage and ampere meters plus front panel voltage adjustment (with 2-15V DC range) on VS-20M, VS-35M and VS-50M. Models RM-35M, RM-50M and RM-60M are for rack mounting.

Astron Model	Cont. Amps	ICS Amps	Size (in.) h w d	Ship. wt.	Regular Price	SALE Price
RS-7A	5	7	3¾ x 6½ x 9	9	$68.95	$59.95
RS-10A	7½	10	4 x 7½ x 10¾	11	85.95	69.95
RS-12A	9	12	4½ x 8 x 10¾	13	99.95	79.95
RS-20A	16	20	5 x 9 x 10½	18	121.95	99.95
RS-35A	25	35	5 x 11 x 11	27	197.95	149.95
RS-50A	37	50	6 x 13¾ x 11	46	285.95	219.95
RS-70A	57	70	6 x 13¾ x 12	48	339.95	259.95
with separate volt/amp meters						
RS-20M	16	20	5 x 9 x 10½	18	144.95	119.95
RS-35M	25	35	5 x 11 x 11	27	204.95	169.95
RS-50M	37	50	6 x 13¾ x 11	46	314.95	239.95
RS-70M	57	70	6 x 13¾ x 12	48	372.95	289.95
with variable output & separate volt/amp meters						
VS-20M	16	20	5 x 9 x 10½	20	170.95	139.95
VS-35M	25	35	5 x 11 x 11	29	238.95	189.95
VS-50M	37	50	6 x 13¾ x 11	46	330.95	259.95
Rack mount models – separate volt/amp meters						
RM-35M	25	35	5¼ x 19 x 12	38	318.95	249.95
RM-50M	37	50	5¼ x 19 x 12	50	354.95	279.95
RM-60M	50	55	7 x 19 x 12	60	467.95	359.95

New Addition…

ASTRON RS-4L • Power supply with built-in cigarette lighter receptacle on the front panel. 13V DC,@ 4 Amps, 3 Amps continuous. 3½"h x 6½"w x 4¼ "d, 6 lbs.....**$49.95**

Solid-state Power Inverters

General Purpose

ASTRON 12/115 • Converts 12V DC to 115VAC @ 60 Hz output. Provides convenient AC house current in your Boat, Car, Truck, Camper, etc. Powers small household appliances, TV, tools, radios and lights up to 200W continuous, with peaks up to 240W. Square wave output, overload protected. Not recommended for devices where high transients are not tolerable. 4½"h x 8"w x 9"d, 9 lbs. **$59.95**

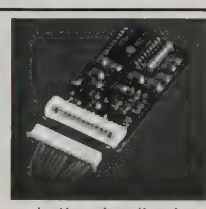
Aircraft

ASTRON 2412 • Converts 22–32V DC to 13.8V DC @ 9 amps. Eliminates tapping into 28V battery for 12V **$59.95**

ASTRON 2412-20 • Same as above, but 16 amps **79.95**

NORCOMM

Sub-miniature Touch-Tone® Decoder



Model NC401 • Designed for selective signaling in many applications. Combines three distinct, separately addressable DTMF Decoders in one unit for multiple user-configurable output functions. Decodes all 16 standard DTMF characters with an address length of 1–14 characters and features E²Prom memory for non-volatile storage of programmed codes, input and output functions, remote programming, deadbeat disable and user outputs. Programs by means of a conventional DTMF Encoder. Comes with 12" multiple leads and plug. 0.80"w x 1.37"l x .23"h **$59.95**

INNOVA ELECTRONICS CORPORATION

Power source for 12V DC Accessories

Portable Power for anything with a male cigarette lighter plug – HAM transceivers, cellular phones, spotlights, inverters, etc…

Model 06-1101 DC POWERPACK (left) • Contains an Internal maintenance-free, sealed lead-acid rechargeable battery rated 12VDC @ 6.5 Amp/Hour, fused at 10 amp. Recharging time from a vehicle with engine running is 1 to 3 hours, or from optional AC/DC adapter – 8 to 10 hours. 7¼"w x 3¼"d x 10"h, 6.8 lbs............**$49.95**

Model 06-9509 • AC/DC adapter **$9.95**

Model 06-1130 DC POWERPACK (right) • Smaller than the 06-1130. The internal maintenance-free sealed lead-acid battery is rated 12VDC @ 3 Amp/Hour, fused at 10 amp. Recharging time from running vehicle is 2 to 4 hours, or from included AC/DC adapter – 4 to 6 hours. 3"w x 3"d x 7½"h, 3 lbs............................**$49.95**

Forbes Group

Ventenna™

Stealth! – Get around those antenna restrictions and finicky neighbors. The **Ventenna** is virtually unnoticeable because it looks like part of the normal structure. To install, just slip it over an existing 1"–2½" plumbing vent pipe, connect up your coax and you're on the air.

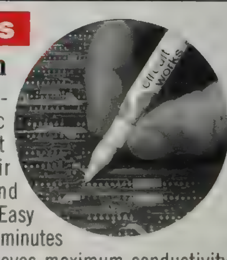
Ready to go!–no tuning or measuring is required.

Choose from single band models for 2M, 220MHz or 440MHz and a 2M/440MHz Dual Bander.

Model	Description	Price
VT-14	2 meters, 3 ft. tall, 2.6dB gain	$44.95
VT-22	220MHz, 25" tall, 2.6dB gain	$44.95
VT-27	2m/440MHz Dual bander	$66.95
VT-44	440MHz, 14" tall, 2.6dB gain	$44.95
VT-15S	Scanner Model 3 ft. tall, 2.6dB gain	$44.95

Circuit Works

Conductive Pen



Features a specially formulated silver thermoplastic designed to link circuit board components, repair traces, make jumpers and shield delicate electronics. Easy to apply, air drys in 3 to 5 minutes at room temperature, achieves maximum conductivity after 20 minutes. Can be heat cured in 1 to 2 minutes at 250 to 300°F. May be soldered at 350°F for <5 seconds after heat cure by using a low temperature tin, lead or silver solder with flux for best results. Traces 1/32" and wider – contains enough material for 100 ft **$10.95**

TOP TRADES • We will take your Clean, Late Model gear in trade towards New Equipment shown in this catalog… write or call for a quote today.

Scanning Receivers

uniden

Scan the Action!
- **Ham Radio**
- **Police, Fire**
- **Emergency**
- **Weather**
- **More...**

BC-147XLT, 148XLT and 855XLT similar in appearance.

UNIDEN BC-147XLT • 16 channel Base unit covering 10 bands, including weather. Covers 29-29.7, 29.7-50, 50-54,136-144, 144-148, 148-174, 406-420, 420-450, 450-470 and 470-512MHz. Two-digit LED display shows the current channel and scan. Keyboard Entry; Direct Channel Access; Manual Step Tuning; Scan; Lockout; Priority; Review; Weather Search; Automatic Squelch; Track Tuning; Memory Back-up, Three Scan Speeds. 9"w x 2¾"h x 6½"d, 1.2 lbs **$99⁹⁵**

UNIDEN BC-148XLT • 16 channel 10 bands with weather alert. Programmable, digital, AC/DC operation. Frequency coverage 29-54, 136-174 and 406-512MHz. Weather button, priority, Lockout button, squelch. AC adapter and telescoping antenna. 9"w x 2¾"h x 6½"d, 1.2 lbs .... **CLOSEOUT $89⁹⁵**

UNIDEN BC-855XLT • 50 programmable channels, 5 banks and 12 bands, all Public Service Bands, four Ham Bands, Federal and Military Land Mobile Bands, and AM. Large LCD displays frequencies programmed and being monitored and modes. Scan delay; Track tuning; Automatic Squelch; Lockout, Weather Search; Direct Channel Access; Priority; Programmable Search; Choice of Scan Speed; Memory Back-up. 9"w x 2¼"h x 6½"d, 1.2 lbs **$179⁹⁵**

UNIDEN BC-560XLA (left) • 16 channel, programmable Mobile unit. 10 bands: 29.0-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 and 470-512MHz. Pushbutton Entry; Two-Digit LED Display; Review Key; Priority; Memory Back-up; Channel Lockout; Direct Channel Access; Weather Search; Built-in Delay; Track Tuning. 13.8V DC, mobile bracket included. 6⅞"w x 1⅝"h x 5½"d, 1¼ lbs **$119⁹⁵**

UNIDEN BC-760XLT (right) • 100 programmable channels, 5 scanning banks, 12 bands. Features and coverage same as BC-590XLT, plus 806-956MHz. Requires 13.8V DC or 117V with AC adapter. 6¹⁄₁₆"w x 1⅝"d x 7¾"d, 1 lb., 3 oz **$239⁹⁵**

UNIDEN BC-8500XLT (left) • 500 programmable channels. 20 scanning banks, 14 bands. VFO for rotary tuning along with continuous band coverage from 25 to 1.3GHz (excludes cellular). Scan rate up to 100 channels per second. Scan delay, NOAA weather, 10 priority channels. AC operation; DC with optional cable. 10½"w x 8"d x 4"h, 4½ lbs **$419⁹⁵**

UNIDEN BCT-2 Bear Tracker (right) • Preprogrammed with all frequencies for Highway Patrol, D.O.T., Local Police and Weather. Simply select the state which you are in and listen! Responds to signals emitted from special "Mobile Extender" transmitters used in most Highway Patrol vehicles. Audibly and visually alerts to the presence of patrol units within a 3 mile radius . . even when they are not using radar! Includes mounting bracket and DC cord. 5"w x 7"d x 1½"h, 1 lb. **$169⁹⁵**

UNIDEN BC-55XLT (left) • 10 channel, programmable handheld scanner, 10 bands. Covers 29-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 and 470-512MHz. Two-digit LCD Display; Review; Channel Lock-out; Battery-Low Indicator; Memory Back-Up; Built-In Delay; Direct Channel Access; Track Tuning. AC/DC operation – uses optional alkaline or rechargeable nicad batteries or AC charger and adapter. 2⅝"w x 6¾"h x 1½"d, 10½ oz......................... **$119⁹⁵**

UNIDEN BC-65XLT • Looks and coverage similar to BC-55XLT, but has more features. Includes nicad rechargeable batteries and AC adapter/charger, weather search ..... **CLOSEOUT $99⁹⁵**

UNIDEN BC-70XLT (center) • Pocket-sized 20 channel, programmable handheld. 10 bands. Covers same as BC-55XLT. LCD Display; Priority; Lockout; Scan Delay; Auto. Search; Track Tuning. AC/DC with built-in Nicad or included charger/adapter. 2¾"w x 6¾"h x 1½"d, 10½ oz ....**CLOSEOUT $99⁹⁵**

UNIDEN BC-100XLT (right) • 100 channels, 10 scanning banks, 11 bands. Coverage same as BC-55XLT, plus Aircraft and Weather bands. Illuminated LCD Display; Weather Search; 10 Priority Channels; Channel Lockout; Scan Delay; Automatic Search; Track Tuning; Direct Channel Access. Battery & charger included. 2¾"w x 7½"h x 1⅜"d, 1¼ lbs ....**CLOSEOUT $149⁹⁵**

UNIDEN BC-200XLT • Looks, size and features same as BC-100XLT except – 200 channels, 20 scanning banks and 12 bands. Coverage is the same, plus 806-956MHz band **$249⁹⁵**

SCANNER TERMS . . .

PROGRAMMABLE • all frequencies are entered directly from the keypad.

DIRECT CHANNEL ACCESS • go directly to any channel without stepping through other channels.

PRIORITY • a channel that is constantly monitored to prevent missing important transmissions.

REVIEW • verifies frequency entered on each channel.

AUTOMATIC SEARCH • automatically finds new active transmissions in any of the bands.

SERVICE SCAN • automatic search of preprogrammed police, fire, emergency, aircraft and marine frequencies.

INSTANT WEATHER • automatically finds National Weather Service (NOAA) broadcasts in your area.

SCAN DELAY • in *scan mode*: adds short delay on desired channels to prevent missed transmissions – then resumes.

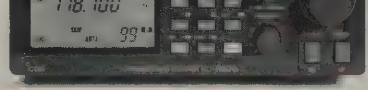
CHANNEL LOCKOUT • allows unused or busy channels to be shipped over when in scan mode.

AUTOMATIC SQUELCH • squelch responds to a factory preset signal level.

TRACK TUNING • allows scanner to achieve maximum sensitivity and reception on each channel.

MEMORY LOCK/KEYLOCK • prevents accidental reprogramming of frequencies.

ICOM
Wideband Scanning Receivers



ICOM R-100 Base or Mobile • Covers 100kHz–856MHz *(except 800–900MHz)* FM, wide FM and AM. Keyboard or Manual tuning, scanning. 121 memories: 100 for frequency/mode, attenuator and preamp settings; 20 scan edge for 10 pairs of ranges for programmed scan; 1 priority. 24-hour clock, 3 antenna inputs, telescoping antenna and mobile mt. Requires 13.8V DC @ 1A, optional AC adapter. 5¾"w x 2"h x 7½"d, 3 lbs............... **CALL**

ICOM R-1 Mini-handheld (left) • Covers 100kHz-1300MHz *(except 800-900MHz)* FM, wide FM and AM. 100 memory channels, various scan modes. Rotary tune or direct keyboard entry, LCD display, 24-hr clock/timer, adjustable LCD contrast, signal indicator, power-saver. Built-in NiCad batteries; optional batteries or 6-16V DC. 1⅞"w x 4"h x 1½"d .... **CALL**

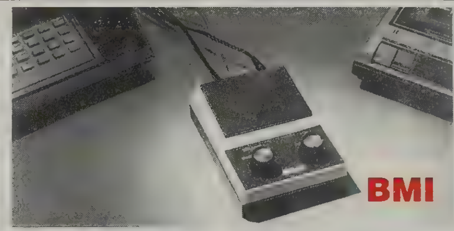
Order by Mail, Fax or Phone
Toll-Free (800) 558-0411 (9:00 AM–5:30 PM) • Fax (414) 358-3337 (24 hours)

Channel Master
Scanner Antenna

Extend scanner range many times with an externally mounted Channel Master Monitenna. Provides efficient reception of the 30-50, 148-174, 450-470, 470-512 & 800-912 MHz bands.

Model 5094A • High-strength aluminum, and weather protected. Comes with 50 ft. length of coaxial cable and Motorola-type plug **$39⁹⁵**

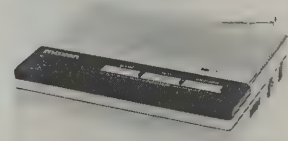
Model 5095A • Everything for roof-top installation: Monitenna, 50 ft. coaxial cable with plug, 5 ft. tri-mast mount, 2 ft. extension standout, double headed nails, and sealing washers........**$49⁹⁵**



BMI *Nitelogger* Automatic Recorder Activator • Accepts audio output from any 8Ω source and provides 600Ω audio and *voice activated* relay operation for triggering a recording device. Only three plug-in connections–one to the radios ext. speaker jack, the other two go into the remote and microphone jacks of a cassette recorder. For ham purposes this device can make a simple crossband repeater by connecting two HT's. Built-in monitor speaker with volume control, VOX sensitivity and delay controls. AC adapter supplied...... **$69⁹⁵**

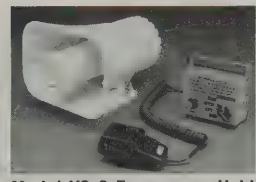
BMI RC-1A Impedance Matching Patch Cord • Provides impedance match between a nominal 8Ω source and a standard 600Ω recorder input. Uses capacitive isolation of the audio signal and provides proper loading for the source device while 20dB of attenuation prevents input overload. Input and output connectors: 3.5mm mini-plugs.......... **$19⁹⁵**

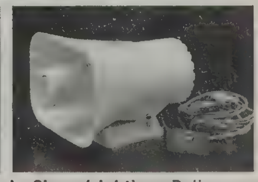
MAXON
Weather Radio



Model WX-3 • Receives the latest local Weather broadcasts on 162.400, 162.475 or 162.550 MHz at a range of up to 50 miles. Sounds *Severe Weather Alert* when triggered by transmitting station's warning tone. 110V AC, with battery back-up in case of power outage. 5¼ x 4½" x 1¼", 12 oz.............**$39⁹⁵**

GROTHE Sirens & Horns



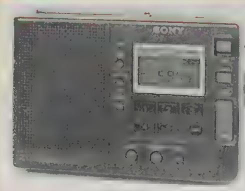


Model VS-2 Emergency Vehicle Siren (right) • Delivers a loud 120dBa (600-1200 Hz) sound level at 4 ft. Comes prewired with 3-position switch - *Siren-Off-Yelp*, 5" x 7" x 8" high efficiency horn speaker, 10 ft. cable, mounting bracket and hardware. Requires 12V DC @ 1.5 amps. 2.7 lbs . **$89⁹⁵**

Model VS-3 Volunteer Vehicle P/A & Horn (left) • Powerful 95W output *Airhorn Sound* with *four different* sounds really calls attention to your vehicle. Rebroadcast feature allows sound from your rig to be rebroadcast and monitoed through the speake, outside. Includes speaker, microphone, controller 10 ft. cable, mt. bracket & hardware. 12V DC **$129⁹⁵**

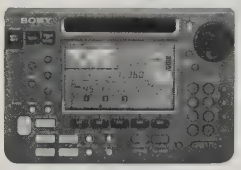
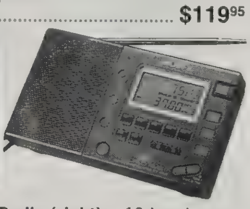
Model VS-4 P/A Emergency Vehicle Siren (left) • Features: *P/A, Rebroadcast, Wail, Yelp, Pulse, Airhorn*. Volume control of all siren modes. Includes speaker, mic, controller, 10 ft. cable, mounting bracket and hardware. 12V DC **$139⁹⁵**

SONY



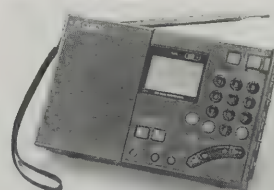
New! **SONY ICF-SW10** • Compact and convenient, easy to use. 12 bands–covers AM broadcast, FM (stereo with headphones) and 9 shortwave bands. Easy analog tuning with tuning indicator for accuracy. 6"w x 3½"h x 1¼"d, 12 oz **$69.95**

SONY ICF-SW30 (left) • 12 bands. Covers AM, FM (stereo) and 10 shortwave bands. Auto Scan Tuning in 1 KHz steps, 15 memory presets. Clock has world and local time display, alarm and sleep timers. Requires 3 "AA" batteries or ext. 4.5VDC. 4⅜"h x 6¾"w x 1 7/16"d **$119.95**

SONY ICF-SW33 World Band Radio (right) • 13 bands, covers 0.5–26.1MHz AM and 87.6–108MHz FM stereo (with earphones). Scan tuning and 17 station memory presets. World time clock displays 38 city names and times, and has five time presets, sleep timer and auto shut-off. News/Music tone control, battery indicator. Supplied with telescopic antenna, carrying case. Requires three "AA" batteries or external 4.5VDC. 6⅝"w x 3¾"h x 1¼"d, 14.2 oz......... **$169.95**

SONY ICF-SW55 World Band Receiver (left) • Similar to ICF-7600, improved. Factory preset name tuning provides access to most listened to broadcasts. Tuning methods: preset station, direct, scan or rotary dial. 125 memories. Requires four "AA" batteries or ext. 6VAC, AC adapter included. 4¾"h x 7⅝"w x 1 5/16"d, 1½ lbs **$369.95**



New! **SONY ICF-SW7600G World Band Receiver** • Covers 153kHz–30MHz AM/SSB/CW and 87.6–108MHz FM stereo (with earphones). 10-key Direct Access Tuning™ and 22 station presets, LCD display. Tone control, external antenna and record jacks, clock/timer with sleep and standby functions, tilt bracket. Includes compact reel antenna, stereo earphones and universal AC adapter. Requires four "AA" batteries. 4 ½ "h x 7½"w x 1¼"d, 1½ lbs. **$199.95**

SoftWave By ComFocus

Reviewed in June '94 Popular Communications

The first Receiver, Digital Signal Processor, Spectrum Analyzer, Multi-mode Demodulator, Decoder, Database and Windows Program in a single product…

A fully integrated digital receiver for Microsoft Windows. Just install the DSP card in your PC, connect the receiver unit and load up the software. Select from one of six "personalities"(Shortwave Communications, VHF World Map, etc…). Select a station from the data base or just click on the World Map to hear the world. Two receive bands: 0.5–30MHz and 108–174MHz; 7 demodulator sections; spectrum analyzer; 46 standard filter bandwidths; a tunable notch filter; fully automatic decoding or Morse Code; completely digital AGC, digital blanking; synchronous AM demodulation; "Tone-Tag"™ narrow band processing and much more! **$1469.00**

SONY ICF-2010 (right) • Covers 150KHz-30MHz, 76-108MHz and 116-136MHz MHz; AM/FM/SSB/CW. Tunes manually or by keyboard entry, automatic scan, memory scan or 32 memory presets. LCD display, switchable IF bandwidth, fine tune. 12/24-hour clock with alarm, programmable timer, and sleep timer. Telescoping and built-in ferrite bar antennas, 4" speaker. Record, earphone, external antenna and DC jacks. Operates from 3 "D" and 2 "AA" batteries, 12V DC, or10V AC adapter. 6½"h x 11⅜"w x 2⅛"d, 3¾ lbs **$359.95**

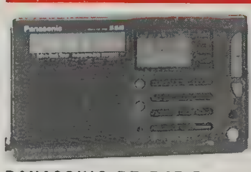
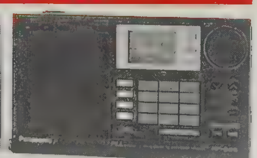
SONY ICF-SW77 (left) • Same coverage (except aircraft) and features of the ICF-2010. Stores up to 100 stations (162 frequencies), allows stations to be selected by name and is capable of storing broadcast schedules. Programmable six character Station Name Display, 50 Hz tuning resolution, FM stereo reception with stereo headphones................. **$499.95**

New! **SONY ICF-SW100S** • The size of a pocket calculator but loaded with features of radios twice its size! AM (LW, MW, SW) FM stereo reception with headphones. SSB reception too! PLL quartz frequency synthesis 1 kHz step. tuning. 50 memory presets. Display shows 24 city names and time display. 50 convenient memory presets. 4⅜"h x 2⅞"w 11/16"d. **$369.95**

SONY

Home Stereo, Auto Sound, Portable Sound, Television, Big Screen TV, Video Cameras, Camcorders available from Audio Plus … See page 151

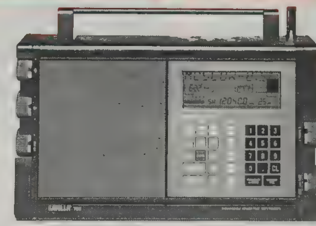
PANASONIC

PANASONIC RF-B45 Portable Receiver • Covers (SW) 1.62–29.99MHz; (MW) 520–1610KHz; (FM) 87.5–108MHz; (LW) 144–288kHz. SSB capable. 6-Way multi-tuning system has 18-station preset memory, frequency direct access, meter band access, up/down manual tuning, memory search with signal strength and auto tuning. LCD display, quartz clock/sleep timer, high/low tone select, DX/Local sensitivity select. Deluxe carrying case, external antenna wire for SW, hand strap and earphone included. Requires four "AA" batteries (not included) 4.7" h x 8.4"w x 1"d, 1.6 lb **$179.95**

PANASONIC RF-B65 Portable Receiver • Features continuous coverage with SSB capability and fine tuning. Tunes in 5 o1 kHz and 100Hz steps. Covers (SW) 1.615–29.99MHz; (MW) 520–1610KHz; (FM) 87.5–108MHz; (LW) `155–5198kHz. FM stereo with headphones. 6-Way multi-Tuning System with 36-station preset memory: Electronic rotary tuning; Direct access tuning with numeric keypad; Meter band access calls up the lowest frequency of a band; Up/down manual tuning; Auto-scan; Memory search. LCD display and metering, clock timer with two zones, high/low tone selector, DX-local selects. Jacks for ext. antenna, earphone and DC-in. Deluxe carrying case, ext. antenna wire for SW, and earphone included. Requires four "AA" batteries for operation and two for clock memory (not included) 7.8" w x 4.5" h x 1.4"d.............................. **$249.95**

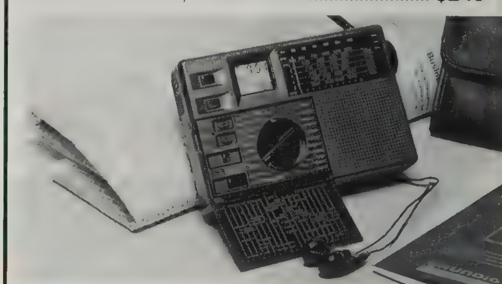
GRUNDIG



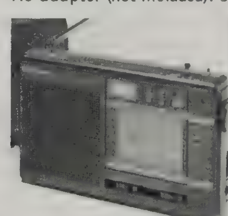
GRUNDIG TOLL FREE Product Info Line: 1-800-872-2288

GRUNDIG Satellit 700 • Covers 1.6-30MHz includes AM, FM and LW bands with 512 standard memory positions. FM stereo with headphones or external speakers (not included). Direct frequency entry via backlit keypad, SSB and synchronous detectors, wide/narrow filters. Dual clocks and turn-on timers, sleep timer, 8 character memory bank labeling with 2,048 memories possible. LCD multi-function display, Built-in telescoping, ferrite antenna and ext. antenna connector, Operates from 110/220V AC, 4 "D" alkaline or nicads, built-in charger. 12"w x 7"h x 2¾"d, 4 lbs **$399.95**

GRUNDIG Yacht Boy 400 • Covers 1.6–30MHz, all shortwave bands plus FM-stereo (with earphones), AM and long wave. Direct frequency entry or scan tuning, 40 memory presets. Single sideband (SSB) with fine tuning control, high-low tone switch. Tilt stand, telescoping antenna. Multi-function LCD display shows time, frequency, band, automatic turn-on and sleep timer. Dual 24 hour format clocks. Includes stereo earphones, compact external reel-up antenna for SW, and carrying pouch. Requires 6 "AA" batteries. or external 9VDC. 4½"h x 7¾"w x 1⅜"d, 1½ lb **$249.95**



GRUNDIG Traveller II • **7 bands:** covers AM/FM broadcast the 19, 25, 31, 41, 49M shortwave bands and 5.8-15.6MHz. Multi-function LCD display, pushbutton and slide controls, tuning indicator. World time selection switch - select a city and read the time! Clock with travel alarm. Requires 3 (size AA) batteries (not included). Telescoping and built-in ferrite antenna. 2" speaker, jacks for included earphones and ext. AC adapter (not included). 5½"w x 3½ "h x 1¼"d........... **$99.95**



GRUNDIG Yacht Boy 206 (left) • **15 bands:** covers AM/FM and 12 SW bands. Provides stereo FM with headphones. Multi-function LCD display with indications of time, alarm time and sleep. LED tuning indicator. 24-hour digital LCD clock/timer with alarm and snooze. Requires 4 "AA" batteries or ext. 4.5V DC. 4½" h x 7"w x 1½"d. **$129.95**

GRUNDIG Yacht Boy 235 (right) • Covers LW, MW, FM stereo and 12 SW bands: 120, 90, 75. 60, 49, 43, 31, 25, 22, 19, 16 and 13M; 2.3-21.85 MHz. Electronic volume and band switches, 12/24 hour clock-timer with light, snooze and sleep. Press a button and 43 major cities, along with the time, appear on the world LCD map. Requires 3 "AA" batteries. or ext. 4.5V DC. 4½"h x 7"w x 1½"d, <1 lb **$139.95**

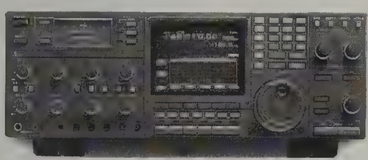
Communications Receivers & Shortwave Radios

ICOM

ICOM R-71A HF Receiver • Covers 100kHz–30MHz, all mode (FM optional). Dual VFOs and direct keyboard entry, 32 tunable multi-function memories. RIT, notch, selectable AGC, noise blanker, tone, squelch, recording jack. Selectivity: 500 Hz, 2.3 kHz, 6 kHz, 15 kHz. Optional wireless remote controller and voice readout units. 110/220V AC, optional kit for 12V operation. 11⅞"w x 4⅞"h x 10⅞"d, 16½ lbs .... **CALL**

R-7000* Wideband Receiver • Like R-71A but covers 25-2000MHz. FM, scanning, 99 memories, more! .... **CALL**

ICOM R-7100 VHF/UHF Receiver • Coverage from 25 to 2000MHz. Dial and keyboard entry, 900 numbered memory channels. Multiple scan capabilities with new window scan, clock/timer, optional TV receive capability................ **CALL**



ICOM R-9000* Communications Receiver

Covers 100kHz–2000MHz continuous, all mode. Manual tune or keyboard entry, 1000 multi-function memories and 8 scan modes. 5" CRT displays frequencies, modes, memory contents, operator entered notes, and functions. Spectrum scope allows observation of adjacent receive frequencies. Terminal monitor function for monitoring of RTTY or Packet information from terminal or TNC. IF shift, notch, noise blanker. 16½"w x 5⅞"h x 14½"d, 44 lbs.

**R-7000 & R-9000 for sale only to Federal and State government agencies and Communications Utilities Companies... Special Order – Drop Ship.*

ICOM R-100 Base or Mobile Receiver • 100kHz–1856MHz (except 800–900MHz); FM, wide FM and AM. Keyboard/manual tuning, selectable steps and scan. 121 memories: 100 for frequency, mode, attenuator and preamp settings; 20 scan edge for 10 pairs of ranges for programmed scan; 1 priority. 24-hour clock/timer, three antenna inputs. Telescoping antenna and mobile mount included. 13.8VDC @ 1A. **CALL**

ICOM R-1 Handheld SW Receiver • Covers 100kHz–1300MHz (except 800–900MHz); FM/wide-FM and AM. 100 memory channels. Programmed, memory, selected mode memory, and auto memory write scanning. Rotary tuning or direct keyboard entry, LCD display, 24-hour clock/timer, adjustable LCD contrast, signal indicator. Power-saver function. Built-in Nicad batteries; or use optional batteries or 6-16VDC from external source. 1⅞"w x 4"h x 1½"d ....**CALL**

KENWOOD

KENWOOD R-2000 Communications Receiver • Covers 150 KHz–30 MHz; 108 –174MHz with optional VHF converter. SSB/CW/AM/FM modes. Dual digital VFOs, Ten multi-function memories. Scanning. Digital display with 100Hz resolution, three built-in IF filters, optional CW filter. S-meter noise blanker, attenuator, squelch, tone. Dual 24-hour clocks with timer, record and phone jacks muting terminals. 117 VAC (13.8V DC opt.) 14⅞"h x 4½"h x 8"d, 12 lbs.............. **CALL**

KENWOOD R-5000 Communications Receiver • Covers 100 KHz–30MHz; 108–174MHz with optional VHF converter. SSB/CW/AM/FM modes. Dual VFO and keyboard frequency control, 100 multi-function memories. 6kHz and 2.5kHz SSB filters; accepts two more for CW, SSB or AM. Selectable AGC, variable attenuator, noise blanker, notch filter, IF shift. Dual 24-hour clocks/timer. Mute, record and headphone jacks. Optional VHF, speaker, earphones, filters, voice synthesizer, computer control, DC cable. 117V AC (13.8VDC opt.) **CALL**

See Price List for Optional Accessories

DRAKE

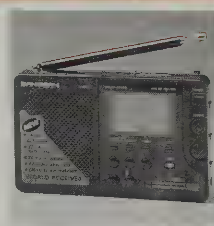
DRAKE R-8 Communications receiver

Covers 100kHz–30MHz with added coverage: 33–55, and 108–174MHz with optional VHF converter. Dual VFOs; 100 memories; multiple-function scanning; AM, FM , RTTY, CW, SSB modes; four voice bandwidth filters; switchable preamp/attenuator; dual noise blanker; IF shift/notch. S-meter; fluorescent display; dual time zone clock; dual antenna connectors. RS-232 control capable. Optional interface software for ms DOS computers and external speaker. 11-16VDC or 120/240VAC 13½"w x 5¼" h x 13"d, 13 lbs........... **\$999.00**

DRAKE SW-8 Portable Communications Receiver

Covers 500kH–30MHz, 87–108MHz FM broadcast (stereo at headphone jack) and 116–136MHz aircraft. Standard and synchronous detection AM, SSB reception on medium and shortwave bands. Direct frequency entry keypad, 0.5uV sensitivity, dual 6/4 kHz selectivity on AM sharp 2.3kHz selectivity on SSB. High contrast LCD provides 100Hz tuning accuracy. Dual-mode clock timer and 70 scannable memories. Powered by optional internal batteries or with supplied AC adapter. 10"w x 4"h x 11¾"d, 10 lbs **\$599.00**

SANGEAN



SANGEAN ATS-202 (left) • **15 bands**, covers AM, FM-stereo (with headphones), 2.3–7.3 and 9.5–26.10MHz. MW 9k/10k switch. Manual and automatic station search, 20 station presets. Large backlit LCD display, clock with alarm and sleep timer. Low battery indication. Requires two "A" batteries or external 3VDC. 5¼"w x 3⅛"h x 1⅛"d, 8.7 oz.....**\$99.95**

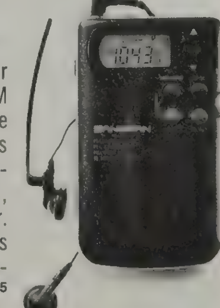
SANGEAN ATS-803A (right) • **15 bands**, covers 150kHz–281kHz AM/SSB/CW, FM-stereo (via headphones), 11, 13, 16, 19, 25, 31, 41, 49, 60, 75, 90 and 120m SW. Keypad or manual tuning with auto scan and 9 memories. LCD display, Built-in 4" speaker and telescoping antenna. External antenna adapter, shoulder strap, AC adapter, stereo earphones and SW handbook. Requires four "D" and two "AA" batteries. 11½"w x 6½"h x 2⅜"d, 3¾ lbs......**\$189.95**

SANGEAN ATS-808 • **16 bands**, covers 150kHz–30MHz, AM/FM-stereo (via headphones), 11, 13, 16, 19, 21, 25, 31, 41, 49, 60, 75, 90 and 120M SW. Tuning methods: Keypad, manual knob or up/down tuning, auto-scan and 45 memory presets. 3" speaker, telescoping antenna. Protective pouch, stereo earphones and external antenna adapter. Requires 6 "AA" batteries. 4½"h x 7¾"w x 1½" d, 1½ lbs **\$189.95**

SANGEAN ATS-818CS World Band Receiver with programmable Cassette Recorder • Continuous coverage 150kHz–30MHz AM/SSB/CW, FM-stereo (via headphones). 45 memory presets. Tuning methods: Direct input, auto or manual scan, memory recall, rotary Dial. AM wide/narrow filter, tone/RF gain controls, signal strength/battery indicator. Programmable recorder, play/record LED indicator, auto-stop feature. Clock with dual time display, alarm and sleep timer. Requires 7 "AA" batteries. Includes AC adapter, external antenna adapter. 11½"w x 7¾"h x 2¾" d, 5 lbs **\$269.95**

SANGEAN DT-200V • **AM/FM Broadcast & TV band receiver**

Compact!–fits in shirt pocket or clips to belt. Covers AM/FM (FM stereo via headphone) plus the audio portion of TV channels 2–13. LCD display, up/down tuning, auto-scan, 19 memories, auto shut-off. Built-in speaker. Belt clip, stereo earphones included. Requires 2 "AA" batteries. 4⅜" x 2⅝" x ¾", 5 oz.... **\$69.95**



YAESU

YAESU FRG-100B High Performance Communications Receiver

Covers 50KHz-30MHz – CW, SSB, AM and optional FM modes. 50 fully-tunable memory channels store frequency, mode and filter selection; two additional memories provide band edge information used in scanning. Multi-function scanning (memory, band selectable group, priority) with carrier or time-delay resume enable searching for new stations, or scanning within a known band. Twin 12/24 hour programmable clocks with on/off-timer and sleep-timer. CAT system for PC control 9.3"w x 3.6"h x 9.5"d, 6.6 lbs ....**CALL**

GRUNDIG

made for you

SATELLIT 700

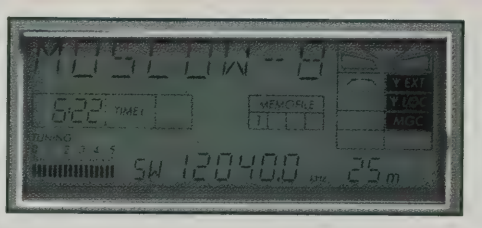
WORLD'S MOST ADVANCED SHORTWAVE PORTABLE

German shortwave technology in its most advanced form. For serious listening to international broadcasts and long distance two-way communications. More flexibility than any other shortwave portable.

Digital/Alphanumeric display with PLL tuning, general coverage shortwave receiver, with SSB and advanced synchronous detector. Dual clocks and turn on/off timers. Sleep timer. Eight character memory page labeling. 512 memories standard; 2048 possible with optional memofiles. Multi-voltage adapter. Built-in Ni-cad charger.

Continuous shortwave tuning from 1.6 to 30 megahertz covers all shortwave bands, plus FM-stereo, AM and LW. Single sideband (SSB) circuitry allows for reception of two-way amateur, military and commercial communications, including maritime and aeronautical. 120 factory pre-programmed frequencies for world-wide reception. Dual conversion superheterodyne receiver design.

Shipped with owner's manual, Grundig Shortwave Listening Guide, warranty card, dual voltage AC adapter and antenna connector.



Multifunction Liquid Crystal Display: The LCD shows time, frequency band, alphanumeric memory labels, automatic turn on/off, sleep timer, bandwidth select position, synchronous detector status and USB/LSB status.

Tuning Made Simple: With both a tuning dial, and direct entry keypad, tuning into your favorite broadcast is both quick and easy.

Synchronous Detector: is but one of the many functions available with the Satellit 700. The synchronous detector helps to eliminate interference so that what you hear is as ear pleasing as possible.

Other important features: Selectable upper/lower sideband. User selectable wide/narrow bandwidth filter. Fully automatic preselector tuner, with manual override feature. Separate, fully adjustable bass and treble control. Automatic gain control, user switchable to full range manual control. Left and Right stereo line-out jacks; stereo headphone jack.WEIGHT: 4lbs.; 12-1/4"L x 7-1/4"W x 3"H.

Yacht Boy 400

The Ultimate in Digital Technology

Noted for: its exacting controls, including fine tuning, volume and high/low tone controls.

Multi-Function Liquid Crystal Display: The LCD shows simultaneous displays of time, frequency, band, alarm function and sleep timer.

The Digital Key Pad: The key pad itself is a marvel of performance with 40 pre-set stations. It's intelligently designed and easy to use.

Grundig's Yacht Boy 400 named Editor's Choice.

Passport To World Band Radio, 1994 is regarded as the leading authority of the shortwave industry. Here's what their testing expert wrote about the Grundig Yacht Boy 400:

"Best performance for price size category, and among the choicest portables of any size, at any price."

"The 400's FM performance is right up there with the very best among world band radios."

GRUNDIG

made for you

Grundig's Yacht Boy 400 has received rave reviews from the shortwave press for combining a wealth of sophisticated features in one compact, portable package that doesn't cost a fortune. It incorporates features found on stationary shortwave systems that cost thousands, such as outstanding audio quality, precise 0.1 kHz increment tuning, up/down slewing, frequency scanning, signal strength indication, and single-sideband signal demodulation.

But the Yacht Boy advantage mentioned most often in reviews was its case of use for the novice listener. Following the included shortwave guide, in moments you can be listening to foreign broadcasts beamed to North America.

Soon, you will be scanning the airwaves to tune in exotic music programs and sports events from faraway locales. Yacht Boy even picks up shortwave amateur (ham radio) broadcasts and shortwave aviation/ military frequencies (cockpit-to-tower communications). The possibilities for family fun, education, and enjoyment are boundless.

For travel or home use, Grundig adds in a dual-time travel clock with snooze and sleep timer. FM band is stereophonic with your headphones. The lighted LCD panel is easy to read in the dark. Comes with a form-fitting pouch, integral telescoping antenna and advanced external antenna on a compact reel, carry-strap, batteries, and complete instructions.

Made by Germany's Grundig, world leader in shortwave radios, Yacht Boy measures just 7-3/4"L x 4-1/4"W x 1-1/4"D; weighs only 20 oz. It slips easily into your carry-on for travel, and fits on a nightstand, office credenza, or yacht cabin console. One-year warranty.

SONY

Travel the Sound Waves.

Hear World Events From A World Away.

Hear It As It Happens.

Imagine being able to tune in to global broadcasts from your own small corner of the world. A Sony World Band Receiver™ radio is your passport to travelling sound waves the world over. The magic of short-wave radio brings international radio signals right into your home or office, and the technology of Sony's World Band Receiver radios makes it easy to tune in to international music and news broadcasts, cultural and sports events, and weather and travel updates, so you can hear events as they happen!

SONY

Shortwave Radios *from* AES® *the Shortwave Experts!*

ICF-SW10
World Band Receiver radios are designed to be compact and convenient. The ICF-SW10 model is no bigger than a paperback book, yet gives you access to thousands of news, weather, talk and music programs from around the world. The 12-band receiver offers touch-of-a button access to FM Stereo, MW and LW bands as well as 9 shortwave bands delivering a generous range of frequencies from which to choose. Analog tuning enables easy tuning to desired frequencies shown in easy-to-read numerals. And a tuning indicator helps bring distant stations closer and clearer than ever. Tune in and let Sony take you there.

- 12 Band Receiver - FM Stereo, MW, LW and Shortwave Bands 1-9
- Easy Analog tuning to desired stations
- Tuning Indicator for accurate tuning
- FM Stereo Headphone Jack
- DC-in Jack to conserve battery life
- Compact size: (WHD) 6" x 3 1/2" x 1 1/4"

ICF-SW10

SONY

ICF-SW30

You don't need an airline ticket or hotel reservations to experience new adventures - all you need is the Sony ICF-SW30 World Band Receiver radio. With this sophisticated 12-band receiver, you can ride the airwaves to another continent or just to the far side of your own. Special Dual Conversion Tuner Circuitry helps to avoid interference from adjacent stations, while Digital Synthesized Tuning provides on-target reception.

- 12 Band Receiver - AM, FM and Shortwave Bands 1-10
- Digital Synthesized Tuning to desired stations
- LED Tuning Indicator for accurate frequency indication
- 15 Station Memory Presets
- Auto Scan Tuning to scan and preview the station you want
- 1KHZ Step Tuning for exact station frequency tuning
- Dual Clock/Alarm
- Compact size:
  (WHD) 6 5/8" x 4 1/2" x 1 3/8"

ICF-SW30

ICF-SW33

ICF-SW33

If you're looking for the perfect travelling companion, take along the ICF-SW33 World Band Receiver Radio. Its built-in World Time Clock makes it a breeze to maintain correct local time when travelling in different time zones. And with PLL Quartz Frequency Synthesis Tuning, you can choose up to 17 stations and tune them in automatically at one touch, or scan the bands with Auto Scan Tuning before stopping at the station of your choice. Other features include:

- 13 Band Receiver including FM, AM and Shortwave Bands 1-11
- World Time Clock adjustable by city
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- Dual Conversion Super Heterodyne Tuner Circuitry for interference rejection
- 17 Station Memory Presets
- Dual Wake-up Stations and Sleep Timer
- News/Music Tone Control
- Headphone Jack
- Compact size:
  (WHD) 6 1/2" x 3 11/16" x 1 3/16"

Ride The Airwaves To Places Far Away.

Experience Ancient Customs With Modern Technology.

ICF-SW7600G

ICF-SW100S

SONY

ICF-SW7600G

Get front and center seats to any event with the ICF-SW7600G World Band Receiver Radio. With multiband AM (LM, MW, SW) and FM stereo reception, you'll always have the best seat in the house. 10-Key Direct Access™ Tuning lets you key in distant stations as easily as calling for reservations. 22 Station Memory Presets bring you quickly and easily to your favorite stations. Features include:

- AM (LW, MW, SW)/FM Stereo Reception
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- 10-Key Direct Access™ Tuning
- SSB Reception for an even wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 22 Station Memory Presets
- Dual Conversion Super Heterodyne Circuitry for interference rejection
- Dual Wake-up Stations and Sleep Timer
- 1 KHZ Step Tuning
- Compact size: (WHD) 7 1/2" x 4 3/4" x 1 1/4"

ICF-SW100S

As the world gets smaller, so do Sony's World Band Radio Receivers. Weighing just over 7 ounces, the ICF-SW100S model is a wonder of technology - the size of a pocket calculator. As miniature as it is, this model is equipped with performance features of radios twice its size, delivering precise tuning, minimal interference and listening clarity. This model may be small, but when it comes to performance, you can't ask for more.

- AM (LW, MW, SW) FM Stereo Reception
- World Time Clock adjustable by city
- 24-City Name/Time Display
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for an even wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 50 Station Memory Presets
- Dual Wake-up Stations and Sleep Timer
- 1 KHZ Step Tuning
- Compact size: (WHD) 4 3/8" x 11/16" x 2 7/8"

SONY

ICF-SW55

Dance to a Latin rumba, a Russian folk dance or a Viennese waltz once you step into the world of the ICF-SW55 World Band Receiver Radio. To ensure that the program you want is at your fingertips, this model can save up to 125 station names in memory. Want to hear a British concert? Just enter "BBC", and let the music begin. And to make sight, as well as sound a simple task, we've included a backlit LCD display with highly visible digital readouts of frequency, station name, clock and other functions.

- AM (LW, MW, SW)/FM Stereo Reception
- 10-Key Direct Access™ Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- Precise Manual or Auto Scan Tuning
- 125 Station Memory Presets
- Built-in Clock with Alarm, Sleep Function and Timer Stand-by
- Universal Time Coordinator
- Backlit LCD readout
- Compact size:
  (WHD) 7 3/4" x 5" x 1 9/16"

ICF-SW55

ICF-SW77

ICF-SW77

World travel through the radio dial has never been so effortless. The ICF-SW77 World Band Receiver Radio offers the convenience of recalling radio frequencies by the broadcaster's name, and performance features that reduce interference and fading to produce reception of incomparable quality. A generous 4" speaker provides separate bass and treble controls for broadcasts that come to life.

- AM (LW, MW, SW)/FM Stereo Worldwide Band Coverage
- 10-Key Direct Access™ Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for a wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- Precise Manual and Auto Scan Tuning
- 162 Station Memory Presets
- Built-in Clock with Alarm, Sleep Function and Time Stand-by
- Universal Time Coordinator
- Backlit LCD readout
- Compact size:
  (WHD) 10 7/8" x 6 13/16" x 1 13/16"

Listen To The Rhythms Of Different Cultures.

Get The Hottest News From The Coldest Climates.

ICF-2010

ICF-2010

Sit back, take it easy and take off to the climate of your choice. With the ICF-2010 World Band Receiver Radio, you can get the hottest news from the coldest climates from the warm comfort of your easy chair. PLL Quartz Synthesis Frequency Tuning ensures that once you land on the station you want, you're there to stay. Then when you're ready to move on, Direct Access Tuning and 32 station memory presets will take you non-stop to your next destination. You'll find this little performer gets a great reception no matter where in the world you go.

- AM (LW, MW, SW)/FM Air Band Reception
- Direct Access™ Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for an even wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 32 Station Memory Presets
- Built-in Clock and Sleep Timer
- Manual or Automatic Scan Tuning
- Compact size:
  (WHD) 11 3/8" x 6 1/4" x 2 1/16"

WORLDBAND RECEIVER

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Features and specifications are subject to change without notice.

Non-metric weights and measurements are approximate.

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Printed in USA 4/94

SONY

Sony Electronics Inc.
1 Sony Drive
Park Ridge, NJ 07656

THE BEST OF BOTH WORLDS.

PRESENTING
The SONY IPS760 PYXIS™ GPS Receiver - The Ultimate Solution For The Navigation Enthusiast.

Whether your application is Marine or Aviation, the exclusive Dual Infocard capability of the PYXIS™ receiver gives you the flexibility to customize the unit for the task at hand; software databases are stored on removable credit-card sized "Infocards" which you can change in seconds.

Insert the Arnav Aviation Database Infocard, and the unit can utilize a powerful graphical moving map display of coastlines, state lines, major rivers and lakes, as well as class B and C airspace boundaries. By using the unit's ZOOM button, you can move in for a closer, more detailed view of Airports and Navaids from the Jeppesen database of North America (other regions are also available).

Add the Aviation Terminal Chart Infocard, and the unit can zoom to a level showing the floors and ceilings of all class B and C airspace in the U.S.

But what about after you land? Bring along your PYXIS™ because there's more.

Slide in a Marine Chart Infocard, and you have an exceptional display of your precise location overlaid on a high resolution graphical moving map showing Buoys, Lighthouses, Beacons, Harbors, Marinas, Depths and coastline graphics.

C-MAP USA has placed its comprehensive world-wide coverage catalog of Marine Charts on three types of Infocards for the SONY PYXIS™ IPS760 so you can select the right card for your needs.

Additionally, you can insert a recordable Infocard to write customized route plans and waypoints from the unit's memory or as you navigate. You can even copy this information from one card to another.

Whether you love fishing, sailing, flying, hiking, hunting, driving or any other outdoor pursuit, the SONY PYXIS™ GPS receiver should be your constant traveling companion. Its superior performance and unmatched flexibility make it the best of both worlds in hand-held GPS receivers.

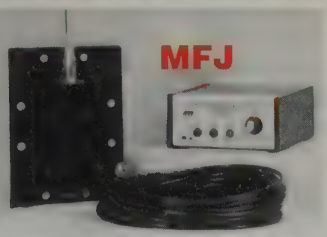
IPS760 FEATURES:
- Superior Performance 8 Channel Parallel Receiver
- Dual IC Infocard Slots For Databases / Memory / Maps
- 1000 Waypoint / 50 Reversable Route Memory Capacity
- Large 4.5" Backlit LCD Display
- Differential GPS Upgradeable
- Waterproof Construction
- Detachable Antenna
- Interface Port

ARNAV INFOCARD FEATURES:
- AIRPORTS (Hard Surfaces>2000 ft., Lat/Long, Icon, Frequency, Longest Runway, Facility Name)
- VOR's • NDB's • GRAPHICS

C-MAP USA INFOCARD FEATURES:
- Coastline Graphics • Buoys • Lighthouses • Depths
- Beacons • Harbors • Marinas • Several Levels Of Zoom
- Detailed Areas Available Via 3 Types Of Infocard: Continental Overview, Local Navigation, Expanded Cruising

SONY

Shortwave Accessories...



MFJ-1024 Outdoor Active Antenna • Covers 50kHz–30MHz. Consists of a 54 inch telescopic whip and amplifier module that mounts outside. The module is connected by 50 ft. length of RG-58/U coaxial cable (supplied) to an inside control unit which has a 20dB attenuator and a gain control to prevent overload from the strong amplified signals. A built-in receiver switch selects between two receivers, an antenna switch selects an auxiliary antenna. LED "on" indicator. RCA phono auxiliary input and output jacks. 12V DC or 110VAC with MFJ-1312. Control: 6"x 2"x 5", module: 3"x 4" x 4" **119.95**

MFJ-1020A Indoor Active Antenna • Covers 300kHz–30MHz in five bands. Sits directly on your desk! A 21 inch telescoping antenna provides maximum signal strength. External antenna input, unit functions as a preselector when using an external antenna. Minimizes intermod., improves selectivity, reduces noise outside of the tuned band. Tune, Band, Gain, On-Off/Bypass controls. Uses 9 volt battery (not included), 9-18VDC or 110VAC with MFJ-1312, 5" x 2"x 6" **$89.95**

MFJ-959B Antenna Tuner/Preamplifier • Covers 1.6–30MHz continuous, provides the proper impedance match between antenna and receiver for maximum signal transfer and best possible reception. Built-in 20dB preamplifier with Gain control, 20dB Attenuator prevents overload. Front panel switches select from two antennas inputs and outputs for two receivers. 9-18VDC or 110VAC with MFJ-1312. 5 "x 2"x 6" **$89.95**

MFJ-752C SSB/CW Audio Filter • All mode, dual tunable. Zero in and pull out stations from noise and interference. Peak, notch, low or high pass signals to eliminate hetrodynes and interference. Filters tune 300–3000Hz, bandwidth varies from 40 Hz to almost flat, notches to 70dB, noise limiter. Connects to speaker output and provides 2 watts to speaker. Switchable Inputs for two radios, and OFF position bypasses filter. 9-18VDC or 110VAC with MFJ-1312. 10" x 2" x 6" **$94.95**

MFJ-722 SSB/CW Filter • Razor sharp switch-selectable SSB/CW filter. For CW: selectable bandwidths of 80, 110, 150 and 180Hz centered on 750Hz. For SSB: steep-skirted, 300–3000Hz filtering with tunable 70dB notch filter. Headphone jack, built-in speaker with 2 watt amplifier. 9-18VDC or 110VAC with MFJ-1312 AC adapter. **$74.95**

MFJ-956 LW/MW/SW Preselector/Tuner (right) • Connects between receiver and antenna to greatly improve the reception of signals from 150kHz–30MHz, especially below 2MHz. Tuning boosts signals while rejecting images, intermod. and other phantom signals. SO-239 connectors. 2"x 3"x 4" **.$39.95**

MFJ-16010 Random Wire Tuner (left) • Matches the impedance of almost any length wire antenna to the input of any receiver for maximum signal transfer and greatly improved reception of signals from 1.8–30MHz. 2"x 3"x 4" **$39.95**

AMECO

AMECO TPA Tunable Preamplifier and Active Antenna
Covers 2 to 30 MHz in 5 bands and functions as a dual function receiver accessory. May be used with an outside antenna as a tunable preamplifier with more than 20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. 9V DC, 110VAC with optional PT-9T AC adapter. 2½"h x 8"w x 6½"d **$69.95**

PALOMAR

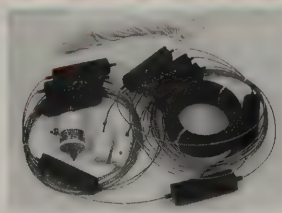
PALOMAR P-405/408 Receiver Preamplifiers (right)
Features same as above except for **receiver only.** Includes a two position antenna switch and switchable 20dB attenuator. Covers 1.8–54MHz, adds 20dB gain and additional selectivity.
P-405 (9V) **$139.95** • **P-408** (115V) **$149.95**

PALOMAR PF-300 Audio Filter (left) • Connects between receiver and headphones or speaker. Provides 16th order low-pass for SSB and 16th order bandpass for CW and digital. Broad (250Hz), Medium (100Hz) and Sharp (45Hz) selection, variable 300-3000Hz. 5W audio output, requires 13.8V DC..... **$149.95**

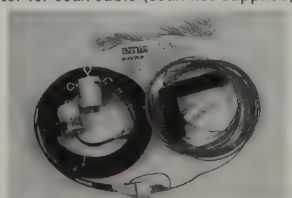
PALOMAR LA-1 LOOP Antenna (right)
Frequency Range: VLF to 15MHz. Picks up less noise than other antennas. Six plug-in loops for various frequency ranges rotate and tilt to produce sharp nulls that cancel interference and noise. Built-in 20dB preamplifier. 2¼" x 7¼" x 6" **$99.95**
Choose loops for: 10-40kHz, 40-150kHz, 150-550KHz, 550-1600kHz, 1.6-5MHz or 5-15MHz ranges..... **each $89.95**

PALOMAR VLF Converters (left) • Converts 10-500kHz (Very Low Frequency Band) to 80 meters. Allows tuning of VLF range on a general coverage receiver or ham transceiver. Model **VLF-A** for Ham Band only, **VLF-S** for use with a General Coverage receiver. Uses 9V battery. 2" x 4¼" x 5" **$79.95**

ANTENNA SUPERMARKET

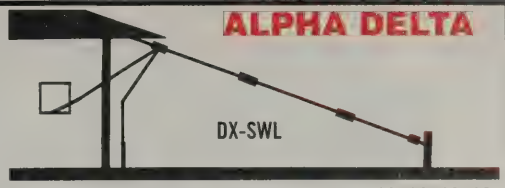


EAVESDROPPER™ Shortwave Antenna • Eight traps provide reception of all Shortwave Bands, 11–90 meters. Includes Zap-Trapper® gas-tube lightning arrestor and 50 ft. of support rope. Overall length is 42 ft., comes assembled. When ordering, specify with 100 ft. of 72Ω twin lead, or weatherproofed SO-239 center connector for coax cable (coax not supplied). **$79.95**



EAVESDROPPER SWL Sloper Shortwave Antenna • End-fed, coil loaded with underslung parallel element, mounts in a sloping configuration. Covers AM broadcast, 120 and 90M, and all Shortwave Broadcast bands, 7–13 meters. Overall length is 67 ft. and comes fully assembled. Includes Zap-Trapper® lightning arrestor, SO-239 connector, and 50 ft. of nylon rope **$79.95**

ALPHA DELTA



ALPHA DELTA SWL Sloper Antenna • Covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120 meter short-wave plus AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band transmit capability with an appropriate antenna tuner – up to 2KW. Overall length 60 ft, requires 50Ω coaxial cable **$69.95**

Popular Books...

Passport to World Band Radio
Your guide for Shortwave listening. Data on every international broadcast station including names, locations, frequencies, operating times, coverage, target area, transmitter power, and more. Contain hourly guide to English language programs. Includes comprehensive test reports on 90 shortwave receivers and a SW buyer's guide..**ARR 251 $17.95**

World Radio & Television Handbook
The most complete listings of radio & TV broadcast services available. It contains hundreds of pages of information by country, frequencies, times languages, products reviews and computer control tests, and more! .....**RAC 059251 $19.95**

MONITOR AMERICA
The National Communications Guide!–2nd edition. Contains over 800 pages of frequencies for federal, state, county and city public safety agencies all across the United States! Includes channelization plans and usages, maps, 10 codes and unit designators. Also lists amusement, sport, railway, military, marine, aircraft, national park frequencies ..**$24.95**

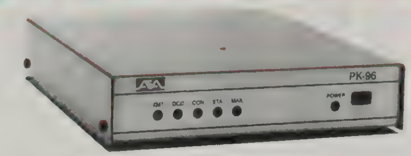
ARRL

NOW YOU'RE TALKING • A complete study guide for the Technician exam and the Novice written exam. A guide to help you select and set up radios, accessories and antennas for your ham radio station. Guides you through your first contacts on all the popular operating modes, including FM repeaters and packet radio. Practical information every beginning ham needs is presented clearly and simply. If you are starting with the Novice license you should also purchase audio cassettes or computer software to learn Morse code along with an ARRL Code Tape.

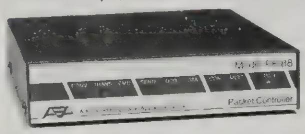
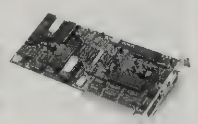
After you receive your license and get on the air, you'll probably want to explore additional operating privileges. The ***ARRL License Manual Series*** represents the best study material for the Technician, General, Advanced and Extra Class Amateur Radio exams. Each book is carefully revised by the VEC Question Pool Committee. The appropriate examination question pool, complete with an answer key, is included for easy reference. The answer key contains page references so you can locate appropriate text explanations as you review the questions before your exam. The ***FCC Rule Book*** should be used along with each publication in the series.

For Prices see ARRL in the Price List

AEA Multi-mode Data Controllers

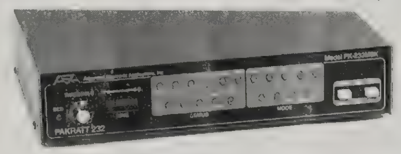


AEA PK-96 High Speed Packet Controller • 1200/9600 baud, 100 baud AFSK tone signaling and 9600 baud K9NG and G3RUH compatible direct frequency modulation, standard. Excellent terrestrial or satellite data controller. True DCD state machine. Modem disconnect header. Identifies TCP/IP, NET/ROM, and<The Net> stations. Automatically receive and reverse-forward messages and control third party traffic. 12 V DC @ 800mA. 11"w x 8¼"d x 2½"h. With 18K Maildrop **$199⁹⁵** • 100K Maildrop **(PK-96/100) $249⁹⁵**

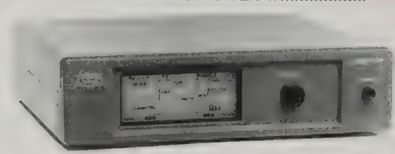
 

AEA PK-88 HF/VHF Packet TNC (left) • Packet controller features RS-232 interface at 300-9600 baud, standard VHF operation, 18K byte Pakmail Maildrop, lithium battery memory backup, AX.25/Level2/Version 2, NET/ROM and KISS compatible, user friendly Host Mode software support. Cable included. 12-16V DC @ 550 mA. 7½"w x 6"d x 1½"h, 2¼ lbs **$134⁹⁵**

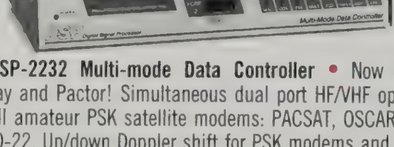
AEA PCB-88 PC Plug-in Data Controller (right) • Plugs into 8-bit expansion slot in IBM PC, XT, AT or compatible. Includes all features of the PK-88 and more! **$164⁹⁵**



AEA PK-232MBX Multi-mode Data Controller • Interfaces any RS-232 compatible computer and any transceiver for all digital modes: Packet, AMTOR/SITOR, Morse code, Baudot, and ASCII RTTY, WEFAX, NAVTEX, PACTOR and TDM reception. Now supports Gateway! Both ports can handle HF & VHF. 18K byte PakMail Packet Maildrop, built-in FAX printer port, KISS compatible, Signal ID mode, built-in modem disconnect header. Host mode software support. Comprehensive manual. 12-16V DC @ 800mA. 11"w x 8¼"d x 2½"h .... CALL



AEA PK-900 Multi-mode Data Controller • Has all of the features of the PK-232MBX. including PACTOR. Features simultaneous dual port HF/VHF operation. Now supports Gateway! Allows packet users connecting to Port 2 the ability to monitor and link other AMTOR, PACTOR, and packet stations using an HF radio on Port 1. High performance bandpass filter-limiter discriminator design for greater throughput on HF. PACTOR memory ARQ and VHF packet DCD state machine circuit.9600 baud plug-in option. Zero-crossing detector for gray-scale fax reception - opt. software required. Cables included. 12-16V DC @ 1100ma mA. 11¾"w x 11¾"d x 3½"h, 4.6 lbs.... **$469⁹⁵**



AEA DSP-2232 Multi-mode Data Controller • Now with Gateway and Pactor! Simultaneous dual port HF/VHF operation. All amateur PSK satellite modems: PACSAT, OSCAR 13, and UO-22. Up/down Doppler shift for PSK modems and outputs for up/down frequency stepping to control frequency. Compatible with G3RUH/K9NG 9600 baud modems. LCD channel mode and status. 11⅞"w x 9⅜"d x 2⅞"h, 4 lbs**$899⁹⁵**

AEA WeFax 256 • New Windows WeFax program for the DSP-2232/1232. Displays, in real time, true gray scale images from the NOAA HF WeFax service or the NOAA APT satellite service. Includes complete image processor for enhancing received images. for highest quality **$129⁰⁰**

MFJ Multi-mode Data Controllers

MFJ-1274C TAPR TNC-2 Clone (left/top) • Interfaces computer with RS-232 serial port and terminal program for VHF/UHF, OSCAR and other non-FM packet. Switchable HF/VHF modems. EasyMail™ personal mailbox, WeFAX reception. KISS interface for TCP/IP, 256K EPROM and 32K RAM. 20 LED tuning indicator, TTL serial port, battery memory back-up. AX.25/Level 2-version 2 software, hardware HDLC for full duplex, true data carrier detect for HF, multiple connects. Comes with transceiver interface cable (less connector) and TTL serial port connector. 12V DC, AC adapter included. 9½" x 7½" x 1½" **$129⁹⁵**

MFJ-1270C TAPR TNC-2 Clone (left/bottom) • Same as 1274 above except does not have 20 LED tuning indicator.. **$109⁹⁵**

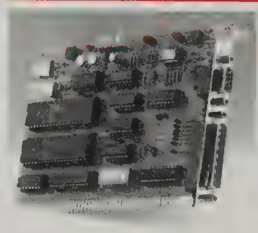
MFJ-1278B Multi-mode Data Controller (right/top)
Ten modes – PACTOR, 16-level FAX, Color, SSTV, PACKET, AMTOR, RTTY, ASCII, CW Navtex and Memory Keyer. New enhanced Mailbox, 32K System RAM, 16-gray level modem, 20 LED tuning indicator, Automatic Signal Analysis, MARS mode, sidetone amplifier, internal modem header, 10 user programmable message buffers, packet connect bell, dual radio ports, "Has Mail" LED indicator, KISS interface, Host mode, Threshold control, RS-232 and TTL ports. Fast start manual. 12V DC, AC adapter included. 9½" x 9½" x 1½" **$269⁹⁵**

MFJ-1278BT Turbo (top/right) • Same as MFJ-1278B above except Turbo version, includes a 2400 baud modem .. **$339⁹⁵**

MFJ Starter Pack • Computer interfacing cable, terminal software and instructions. Order **MFJ-1282B** Multi-Com disk or **MFJ-1283** tape for C64/128/VIC-20. **MFJ-1284** for IBM or compatibles or **MFJ-1287** for Apple Mac......... **See Price List**

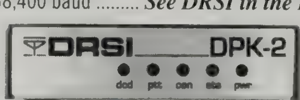
MFJ-1289 Multicom Program for MFJ-1278B • Supports color SSTV, 16-level FAX, packet picture. Menu driven, bursting with features - one key micro, call alert, auto router, auto parameters setting to TNC, text editor, 32K receiver buffer, and more! Complete with cable. (IBM 5-1/4 ")........ **$59⁹⁵**

DRSI • Digital Radio Systems



PC* Packet Adapter System for IBM PC and Clones

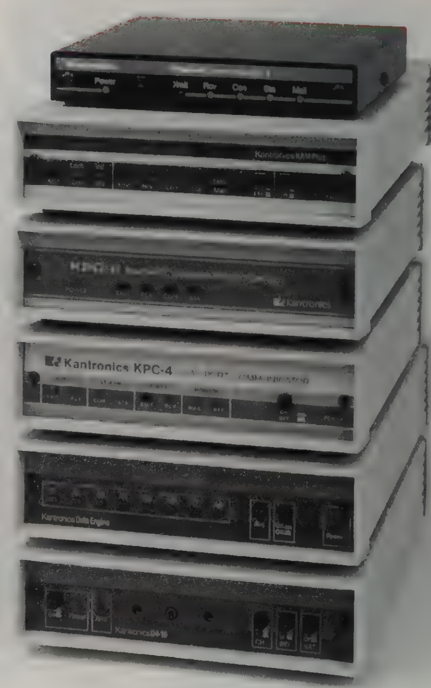
A half-length, plug-in option card for IBM PC XT/AT and compatible computers. **PCPA-1** has two ports; one with a 1200 baud AFSK modem for direct connection to an FM transceiver, the second accepts an external modem using either RS-232 or TTL levels. When used with the **DRSI HF Modem**, the system becomes a complete HF/VHF dual-port TNC with simultaneous connects on both ports. **PCPA-2** has two 1200 baud VHF ports. Software includes a split screen, menu driven terminal program, terminate-and-stay resident background AX.25 device driver, stand alone TNC emulator and utility programs. Terminal program has pop-up windows and on-line help functions, scroll buffer, printer support, etc. **PCPA-3** has two serial ports for a special dual frequency HF/BBS system and is typically used with two DRSI HF*Modems at independent data rates up to 38,400 baud .... ***See DRSI in the Price List***



DRSI DPK-2 Packet TNC • A compact, low power, ALL CMOS. Less than 40 ma. draw at 12 VDC. 100% firmware compatibility with the TAPR TNC-2 and runs ROSE and NET/ROM. Includes paKet 5.1 disk, V1.8a firmware, Personal message System and connectors. 1¼"h x 5"w x 6¼"d, 14 oz...... **$114⁹⁵**

DPK-9600 High-Speed Packet TNC • 4800/9600/19,200 Baud. 100% Compatible with Tapr TNC-2 and clones. Integral direct FSK modem with the three speeds–jumper selectable speeds. Serial speeds up to 38.4kb, runs ROSE and Net/Rom. G2RUH/K9NG compatible. Battery-backed RAM. 12V DC @ 50ma. Connectors included. 1¼"h x 5"w x 6¼"d 14 oz. **$249⁹⁵**

KANTRONICS Packet



Item descriptions in order (top to bottom), below…

KANTRONICS KPC-3 Packet Communicator • Features a dual-level command set: NEW USER level provides 23 command most frequently used in basic packet and TERMINAL level provides complete access to the more than 130 commands available for full operation when ready. Requires only 6-25VDC at less than 40 ma., making it perfect for portable or other low power operations. 32K RAM–expandable to 128K or 512 bytes. WEFAX operation with opt. SuperFax II program for PC compatibles. 0.8"h x 5.2"w x 5.2"d, 11 oz........ **$119⁹⁵**

KANTRONICS KAM Plus All Mode Communicator • Features two radio ports, a Personal Packet Mailbox and two modems for simultaneous VHF/HF gateway operation. VHF port supports 1200 baud Packet and reception of WEFAX. The HF port supports all HF modes: CW, RTTY/ASCII, AMTOR-AMTOR 625, NAVTEX/AMTEX, PACTOR & WEFAX; MARS compatible. Software Carrier Detect, KISS mode, real-time clock, battery back-up and KA-NODE operation. Operates RS-232 port or the TTL port used on standard shifts and can be user programmed for any shift. 12VDC. 1¾"h x 6"w x 9"d, 2½ lbs............ CALL

KANTRONICS KPC-2 Packet Communicator • Selectable 300/1200/2400 baud operation. HF and VHF modem built-in, 32K EPROM, 4K EEPROM, 32K RAM, enhanced command structure, full duplex operation, TLL/RS-232 serial port, and multiple connect capabilities. Supports terminal, HOST, KISS & BBS modes. WEFAX and KA-NODES support, more. 12V DC, AC adapter included. 1¾"h x 6"w x 8"d, 2¼ lbs **$169⁹⁵**

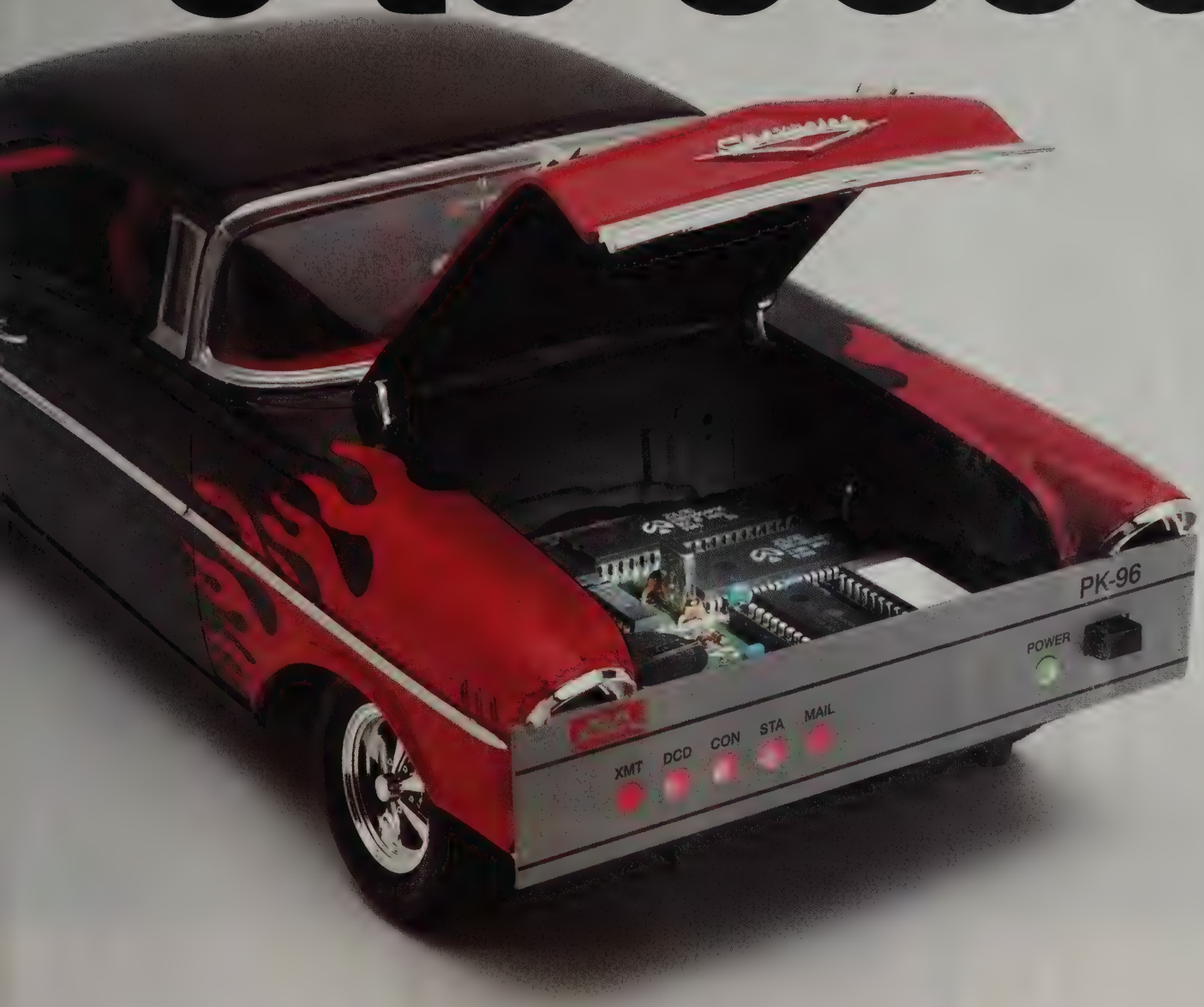
KANTRONICS KPC-4 Packet Communicator • Features similar to KPC-3 but speed only 1200 bps or higher. Includes simultaneous dual radio ports which allow gateway operation. 32K RAM, expandable to 64K. 1¾"h x 6"w x 9"d . **$299⁹⁵**

KANTRONICS Data Engine • Dual port high-speed TNC with : AX.25 packet firmware. Modems available with data rates up to 19.2K baud–install second modem for dual port operation. G8BPQ Packet Switch firmware available (enhanced Net/Rom emulation). Open architecture, includes developers manual, V40 processor/10MHz clock, 64K RAM–expandable, EPROM socket supports up to 1/2Mb firmware. RS-232 port supports to 19.2K baud. Hardware HDLC (85C30), lithium battery backed RAM, real time clock. 1¾"h x 6"w x 9"d, 2½ lbs **$299⁹⁵**

KANTRONICS D4-10 High Speed Data Radio • Couple with Data Engine and DE 19K2/9K6 modem card for 19,200 or 9600 baud operation on 100kHz channels within the 70cm band. 10W output. 12VDC. 1¾" x 6" x 8", 2 lbs............**$349⁹⁵**

KANTRONICS KTU with Weathernode *(not shown)* • Weather sensors attach to the KTU, and the KTU attaches to any brand TNC. Anyone can connect and request weather statistics, via packet. Temperature probe with 40 ft. cable included. Optional wind speed/direction sensor and rain gauge. **$309⁹⁵**

0 to 9600



With Packet Transmission

Satisfy your need for speed with the new PK-96 9600 baud packet controller from AEA.

This high-performance machine comes standard with 1200 baud AFSK tone signaling, as well as 9600 baud K9NG and G3RUH compatible direct frequency modulation. The PK-96 makes an excellent terrestrial or satellite data controller. It can be used for high-speed data links to eliminate bottlenecks and increase system capacity.

Big capability in a small package is what you get from the PK-96. Under the hood, there is a 18K battery-backed MailDrop which is easily expandable to 100K. MailDrop allows you to automatically control third-party traffic and receive and reverse-forward messages.

Bring your system up to speed. Call AEA's Literature Request Line at (800) 432-8873 for more information, or call us direct at (206) 774-5554. Contact your favorite ham radio equipment dealer for the best pricing.

AEA

Connect with us

Imagine this much power unleashed by a 9-volt battery. That's the KPC-3.

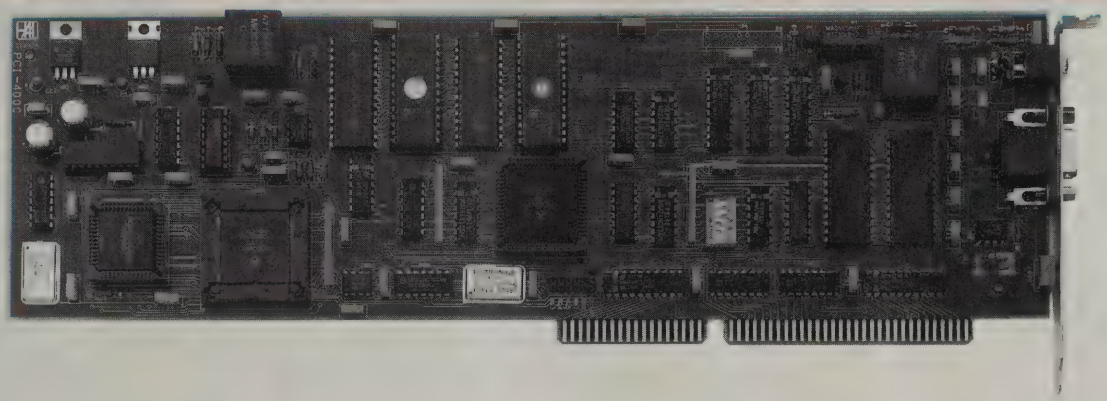
Kantronics KPC-3

It's one of the smallest TNCs you can buy. One of the least expensive. It uses the least power. And it's extremely user-friendly. Yet it offers enough performance to satisfy even advanced users. The KPC-3 has more than 20K in personal mailbox space that is inexpensively expandable to 100K; it runs on a 9-volt battery, so it's portable; and it's very affordable. So if you've been wondering why packet beginners and veterans alike choose the KPC-3, now you know. Maybe you should catch the same wave.

Kantronics

Tough Band Conditions Demand The Best HF Modem:

The HAL PCI-4000/M



Regardless of the high's and low's of the sunspot cycle, the HAL PCI-4000/M HF Modem gives your digital communications the best chance to get through...reliably and efficiently.

Whether it's QRM you're fighting or a K-index at the vanishing point, it takes more than a low-cost "do-everything" gadget to work ALL the signals, not just the strong ones. If you've tried the budget modems and been disappointed, the HAL PCI-4000/M will show you how good HF digital communications can be...AMTOR, PACTOR, BAUDOT, ASCII, and CLOVER (the only modem *anywhere* for CLOVER).

WARNING! **You'll never be satisfied with anything less once you've tried a HAL modem.**

Check out these features:

- CLOVER, PACTOR, AMTOR, BAUDOT, & ASCII RTTY
- Plug-in card for PC-386 or PC-486 personal computer
- Programmable tones for AMTOR, PACTOR, and RTTY
- Highest data speed on HF (CLOVER)
- High-performance Digital Signal Processing (DSP)
- Friendly terminal software
- Wide variety of third-party software support
- HAL design and manufacturing - quality you can trust

Was $995. Order your PCI-4000/M today for

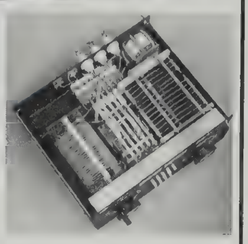
ONLY **$699.95**

The best doesn't always cost a lot more.

HAL Communications Corp.
P.O. Box 365
Urbana, IL 61801-0365
Phone (217) 367-7373/FAX (217) 367-1701

NYE Accessories

MB-V-A 3KW Antenna Tuner



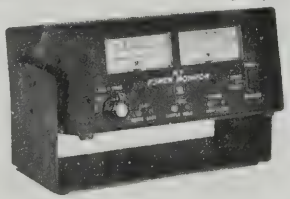
Low-pass Pi-Network tuning 1.8–30MHz continuous. Heavy duty silver plated continuously variable inductor with 25:1 vernier dial. 7KV variable capacitor and 15KV switch selected fixed output capacitors. Tunes any antenna 1/4-wave length or longer from 40–2000Ω and provides harmonic suppression. (***Note:*** *Some antennas not tunable at 1.8MHz).* Automatic, metering of SWR without reset or calibration. Separate RMS wattmeter (300 or 3KW) - automatically switched. Precision 2½" recessed and backlighted meters display SWR and power - continuously. Rugged, silver plated 5-position pushbutton antenna switch selects 4 antennas (2 coaxial, single wire and balanced line) and tuner bypass. Trifilar-wound 3KW toroid balun provides balanced output from 200 to 1000Ω and unbalanced output down to 20Ω. Requires a standard 9V battery for meter circuits and a external 12V DC source for meter lights (*both items not supplied*). 14¾"w x 6¾"h x 12¼"d, 18 lbs **$699.95**

Other NYE Tuners:

MB-IV-A1 • Antenna tuner; same specifications as MB-V-A except no antenna switching circuitry or balun **$569.95**

MB-IV-A2 • Antenna tuner; same specifications as MB-V-A with balun but no antenna switching circuitry **$599.95**

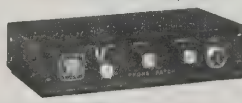
MB-V-B • Antenna tuner; same specifications as MB-V-A except no power or SWR metering capability.............. **$549.95**



NYE Power Monitor System

Combination fully automatic SWR meter, peak and average reading wattmeter, reverse power meter and self contained ALO relay circuit. Full-wave detection and adjustable hold time captures RF peaks and shows true PEP output. The separate SWR meter reads direct, without adjustment, from 0.5W-5KW. The ALO circuit provides for automatic shutdown of your linear amplifier in case an excessive SWR condition should unexpectedly occur. Powered by nicad batteries which are kept charged by a small amount of the applied RF or by the separate AC adapter supplied for charging and backlighting of panel meters. Separate calibrated remote coupler covers 1.8 to 30MHz. Two models: RFM-003 (3KW sensor and meter range) or RFM-005 (5KW sensor and meter range). *Optional* 300 or 500W couplers. 3⅜"h x 7½"w x 5"d, SO-239 connectors.

RFM-003 – $329.95 • RFM-005 – $349.95



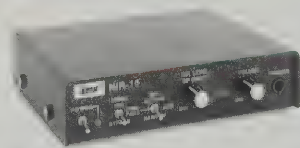
NYE Phone Patch (left) • Interfaces your transceiver with the telephone line for conducting phone patch operations. Automatic line level control for comfortable operator monitoring and NULL control for superb VOX operation. When installed in-line, full microphone function is retained. 1⅝"h x 7⅛"w x 4¼"d. Compatible with all transceivers.

Model 047-001 • has 4-pin microphone connector.... **$129.95**
Model 047-002 • has 8-pin microphone connector **144.95**

NYE Low Pass Filter-020-001 (right) • Installs between rig and 52Ω coax fed antenna systems. Eliminates TVI caused by transmitter harmonics falling in the TV bands. Usable from 1.8 to 30MHz, rated at 2KW and will handle 5KW SSB peaks. Three constant-K, plus two precision tuned M-derived sections give a flat, low loss passband and stopband for over 65dB attenuation above 57MHz. SO-239 connectors..... **$45.00**

JPS Communications, Inc

Solves noise problems!

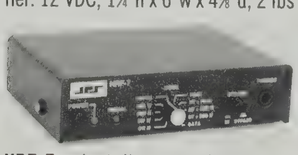


NIR-10 Noise & Interference Reduction Unit

NIR-10 • Provides Real time Digital Signal Processing (DSP) at 40MHz – install at the audio output of a communications receiver to enhance the quality of received voice and CW signals. ***NIR Mode***: reduces or eliminates hetrodynes, white noise, ignition noise, RTTY interference and power line noise. ***PK (PEAK) Function:*** reduces white noise and interference. ***NF (Notch Filter) Mode:*** easily removes multiple hetrodynes. ***BP (Band Pass) Mode:*** features adjustable center frequency, selectable bandwidths, extremely steep skirts and >60 dB ultimate rejection. 12 VDC. 2" x 7" x 6", 2 lb........... **$349.95**

NF-60 DSP Spectral Notch Filter

NF-60 • Digital Signal Processing automatically and effectively removes MULTIPLE interfering hetrodynes (tones and whistles), tune-ups and CW/RTTY tones. Connects between the receiver audio output and speaker. Built-in speaker amplifier. 12 VDC, 1¾"h x 6"w x 4⅜"d, 2 lbs **$160.00**

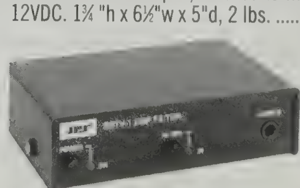


NRF-7 Noise Reducer and Filter Unit

NRF-7 • Installs at receiver audio output–provides several functions that improve reception for Amateurs and SWL's. Reduces or eliminates atmospheric (white/pink) noise and multiple hetrodynes. No-Delay filters for AMTOR, PACTOR, Break-in CW. Sharp, non-ringing CW and Voice filters, plus auto NOTCH filter and white noise reduction Internal speaker amplifier 12VDC. 1¾ "h x 6½"w x 5"d, 2 lbs. **$249.95**

NTR-1 Wide Band Noise and Tone Remover

NTR-1 • A general purpose audio processing unit for noise reduction and multiple tone removal for AM/FM or other wideband (160–6600Hz) signals. Also provides narrow band(100–3400Hz) operation for SSB, CW or Data reception. Reduces atmospheric noise through dynamic peaking and rapidly removes multiple tones from voice signals. Installs at receiver audio output, has built-in audio power amplifier. 12VDC. 1¾ "h x 6½"w x 5"d, 2 lbs. **$169.95**



SSTV-1 DSP Filter for Slow Scan TV

SSTV-1 • Designed for Slow Scan Television (SSTV) reception. Installs at receiver audio output. Two DSP filters reduce or eliminate adjacent channel and in-band interference which can cause "tears" and color shifts–clears up noisy and distorted SSTV pictures. Sharp cutoff passband centered at the sync pulse frequency of 1200Hz, yet wide enough to pass VIS and other information. Linear phase, steep skirted passband of 1500Hz–2300Hz for the picture data Effectively removes any offending tones, etc., below 1050Hz and above 2300Hz. 12VDC. 1¾"h x 6"w x 4¼"d, 2 lbs. (Milwaukee only)..... **$160.00**

Power Pack • 115VAC/12VDC adapter for JPS units.... **$16.00**

Order Now for Same Day Shipment!

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Popular Microphones...

ASTATIC

ASTATIC D-104-L (left) • The original "super talk power" microphone, a favorite of hams for decades. It's high output and 300-7500Hz response with rising characteristics between 500-4000 Hz, provides maximum intelligibility throughout the voice range . Shock proof cartridge with high-Z crystal element, metal sealed for protection. Solid machined brass parts, heavy mesh grille–all chrome plated, 3" dia. x 1⅛"d, 14 oz. Requires T-UG-9 stand **$39.95**

10DA-L (center) • High-Z dynamic microphone with top amateur SSB performance. Features a controlled 300–3000 Hz response that provides high attenuation of the unwanted sideband, and better copy through heavy interference. 2-7/16"w x 2⅛"h x 3-1/16"d, 17 oz. Requires T-UG-9 stand............. **$49.95**

T-UG9 Microphone stand (right) • Accepts the D-104-L or 10DA-L heads above. Has a built-in adjustable amplifier with an output impedance that matches most transmitters. Side switch bar for PTT with slide-up clamp for locking down. Height is 8½" w/o head, base is 5½" diameter. Chrome neck, grey base, 6-wire coiled cable. Requires 9V battery.... **$50.00**

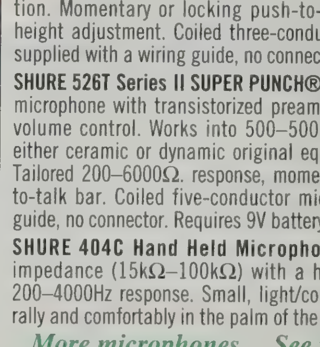
SHURE

SHURE 444D Base Station Microphone (left) • A dual-impedance CONTROLLED MAGNETIC® fixed station microphone with a 200–6000Hz response tailored for optimum speech intelligibility. Switch selectable high (15kΩ–10MΩ) or low (200–1000Ω) impedance, and Normal or VOX operation. Momentary or locking push-to-talk switch bar, 2½" height adjustment. Coiled three-conductor microphone cord, supplied with a wiring guide, no connector. 2 lb, 6 oz. ...**$79.95**

SHURE 526T Series II SUPER PUNCH® (center) • A dynamic microphone with transistorized preamplifier and adjustable volume control. Works into 500–5000Ω inputs, replacing either ceramic or dynamic original equipment microphones. Tailored 200–6000Ω. response, momentary or locking push-to-talk bar. Coiled five-conductor microphone cord, wiring guide, no connector. Requires 9V battery. 2 lb, 11 oz...**$109.95**

SHURE 404C Hand Held Microphone (right) • A high impedance (15kΩ–100kΩ) with a high output level and 200–4000Hz response. Small, light/compact case fits naturally and comfortably in the palm of the hand. 17 oz **$54.95**

More microphones... See index for Heil



DIAMOND Systems

Amateur Radio License Study Courses for IBM PC/XT/AT and "look-alikes" using PC/MS DOS

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ALINCO ELECTRONICS INC.

See page-two for ALINCO Prices and a complete list of accessories.

Important!... be sure to check with us for the Latest

"Hot Deals" Sale Prices Coupons Trades, etc.

DJ-180T 2 Meter HANDHELD • Simple, intuitive operation makes it easy to operate so it's not necessary to spend hours studying the instruction manual. Large 16-digit DTMF pad, highly visible illuminated LCD display. Covers 144–148MHz transmit/130–174 MHz receive. 10 multi-function memory channels including one Call channel–can be upgraded to 50 or 200 channels with optional plug-in chips–stores all operating parameters including odd splits (0-15.995MHz). Output: 2.0W with standard 7.2V-700 mAh battery; 5W with optional battery or 13.8V. CTCSS encode and decode are standard. Automatic power off, low battery indicator. 5.3"h x 2.3"w x 1.3"d, 0.77 lbs. • Model **DJ-180TH** is 5W with 12V-700 mAh battery standard.

DJ-F1T 2 Meter MINI HANDHELD • Covers 144–148MHz transmit/138–174 MHz receive, also 118-136MHz (AM) receive with modification–programmable VFO range. 40 multi-function memory channels including Call one channel, 8 scanning modes, priority function (dual watch). Output: 2.0W with standard 7.2V-700 mAh battery; 5W with optional battery or 13.8V. Pager and code squelch, optional VOX operation. CTCSS DTMF encode and decode are standard. Illuminated DTMF keypad, autodialer, battery saver. 4.3 "h x 2.1"w x 1.5"d, 14 oz. • Model **DJ-F1T/HP** is 5W with 12V-600mah battery standard

DJ-G1T 2 Meter HANDHELD w/"*Channel Scope*" • Monitor 7 different memory channels simultaneously! The over-sized display shows seven bar-graphs, each assignable to an independent memory channel. If one or more memory channels becomes active, it shows on the corresponding bar-graph lets you know–relative signal strength too. The display can also show activity on the entire band in 5, 10, 12.5, 15, 20, 25, 30 or 50KHz steps–like a spectrum analyzer. Covers 144–148MHz plus 440–449.995MHz receive only (cross-band semi-duplex operation). Also, 118–136 (AM) aircraft receive. Output: 2.0W with standard. 7.2V-700 mAh battery; 5W with opt. battery or 13.8V. 80 multi-function memory channels (odd splits on all), 6 scan modes, 5 autodialer memories. CTCSS encode/decode standard, DSQ for private paging, great audio–more! 5"h x 2"w x 1.75"d, 13 oz.

DJ-580T 2 Meter TWINBAND HANDHELD • *One of the most popular, ever!* – A super-compact 2m/440MHz HT with full-duplex cross-band capability and Super Audio! Covers 144-148/440–440.995MHz transmit and 130–174/410-470MHz receive. MARS/CAP transmit and 118-136MHz (AM) after modification. Simultaneous receive on both UHF/VHF at the same time using separate squelch and volume controls–also receive on one band while transmitting on the other. 40 multi-function memories–intermix any combination of VHF and UHF, 8 scan modes. Output: 2.0W on both bands with standard 7.2V-700 mAh battery; 5W with optional battery or 13.8V. CTCSS encode and decode are standard. Autodialer, DTMF code squelch and paging functions. Illuminated keypad, battery saver automatic power off–more! 6.65"h x 2.24"w x 1.23"d, 0.97 lbs

DR-119T 2 Meter SUPER COMPACT MOBILE • 50/5W output– covers 144–148MHz, 130–174MHz receive with modification. 14 multi-function memory channels, 4 scan modes. Highly visible LCD display. Built-in programmable encode/decode. DTMF mic. with UP/DOWN buttons and DTMF encoder for convenient frequency/memory selection. 13.8V @ 11A. 5½"d x 2"h x 6¾"d, 2.4 lbs.

DR-130T 2 Meter MOBILE • 50/5W output–covers 144-148MHz transmit/140-174MHz receive. 20 multi-function memory channels–upgrades to 100 with optional plug-in chip. four scan modes. Large LCD with choice of frequency or channel display. 50 tone CTCSS encode and optional decode.Timeout timer (30-450 sec.), clone capability. DTMF microphone with UP/DOWN buttons and DTMF encoder. 13.8V @ 9.5A. 5½"w x 1½"h x 6"d, 2½ lbs • Model **DR-430T** is 440MHz, 35W version.

DR-570T 2m/70cm TWIN BAND MOBILE • *Two radios into one!* Covers 144–148/440–450MHz transmit/receive and 130-170/340-470 MHz with MARS/CAP modification. 20 memory channels, four scan modes. Output: 45W (2m), 35W (440MHz). Full duplex cross band operation, separate controls for each band. Large dual LCD display, illuminated controls. CTCSS encode and decode, duplexer built-in. DTMF microphone with UP/DOWN keys and DTMF encode. 13.8V @ 11A. 5⅞"w x 2"h x 6⅞"d, 3¾ lbs.

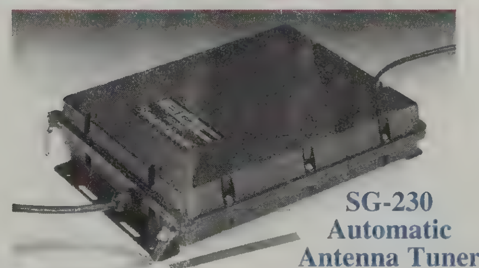
DR-600T 2m/70cm TWINBAND MOBILE • *Two radios in one!* Rugged, wide coverage, and *high-tech* features, suitable as a mobile or base. Covers 144–148/440–450MHz transmit and 150–173/410–470MHz receive. Modifiable for 118-136MHz (AM) aircraft band receive and MARS/CAP transmit. Dual watch, full duplex cross band operation, with independent controls for each band. 28 multi-function memory channels, multi-function scanning. Output: 45W (2m)/35W (440MHz). Optional kit allows separation of front panel from the transceiver for custom install, remote control possible from any DTMF capable 2m or 70cm transceiver. CTCSS encode and optional decode, separate VHF/UHF outputs. Remote control microphone allows control of a number of functions. Large dual LCD display. 13.8V @ 10A. 5⅞"w x 2"h x 7"d, 3¾ lbs.

DR-1200T 2 Meter DATA RADIO • Engineered for optimum **Packet Radio** performance and operating convenience. Supports 1200/2400 BAUD, modifiable to 9600. Covers 144-148MHz with 5, 10, 12.5, 15, 20 and 25KHz resolution. 14 multi-function memory channels, 4 scanning modes. 5W/5W output. Illuminated LCD display with function indicators, , programmable CTCSS encode and decode. Includes TNC interface cable, voice operation requires optional microphone. 13.8V @ 5.5A. 5½ "w x 2"h x 6¾ "d, 2.2 lbs. Model **DR-1200TH2** supports 9600 BAUD high speed.

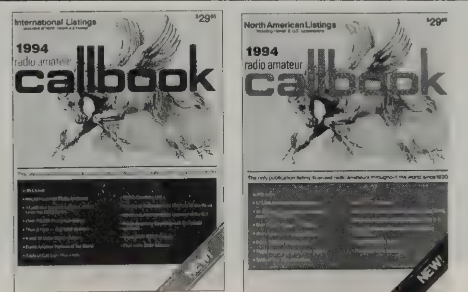
For Alinco Prices & Accessories see Price List and check Index for other Alinco information

SG-2000 • A rugged commercial grade HF transceiver that provides 150W PEP output. Modes: A3A, A3H, A3J and CW in LSB and USB, true AM in receive mode and data. Comes programmed with 644 ITU channels and 100 user defined channels that can be set to the ham frequencies with in the 1.8–30 MHz range; receives 500kHz–30MHz. Keypad control with 21 illuminated keys. Scans ITU channels and 100 memories in adjustable scan speeds and rates. An extra large LCD, wide angle display has adjustable backlighting, provides easy viewing night or day. Operates as a single unit, or the front panel can be removed to function as a remote head. Built-in computer control capability allows the SG-2000 to be controlled by any standard RS-232 protocol connector which allows easy operation on all digital modes. 12VDC @ 16A. 4.7"h x 10"w x 15"d, 12 lbs ....**SGC 0401 $1479.00**

See SGC in the Price List for a of list optional accessories for the SG-2000, and other products.



SG-230 (*The Smartuner*) • A automatic HF antenna tuner capable of tuning any length antenna from 8 to 80 ft. long with in the 1.8–30MHz frequency range. *Note:* 160 meter operation requires a minimum length of 8 ft. Operates with very low power, even tunes itself on an SSB signal; handles up to 150W. A microprocessor controls the switching of 64 input and 32 output capacitor combinations, plus 256 inductance combinations in a pi-network to tune an unknown antenna in just two seconds. 500 memories store previous tuning combinations to tune in milliseconds. Waterproof, great for mobile-marine installations! Requires 10 to 15VDC @ 0.9A. 12"w x 16"d x 3"h, 8 lbs.............**SGC 5412 $489.95**



Don't QSL without one!

The 1994 North American Callbook • 1,592 pages! Lists the calls, names, and addresses for more than 500,000 licensed amateurs in all countries of North America, from Panama through Canada, including Greenland, Bermuda, and the Caribbean islands, plus Hawaii and the U.S. **$29.95**

The 1994 International Callbook • 1,720 pages! More than 500,000 licensed amateurs in countries outside North America. Includes South America, Europe, Africa, Asia, and the Pacific area (except of Hawaii, and U.S. poss.)....**$29.95**

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Prices • Specials • Important Information • More!

DEMAND THE BEST

DJ-580T *Best Performance*

The Right Features: Alinco's DJ-580T offers powerful user friendly features that make operating easier. Many new radios available today are so complex that an instruction manual needs to be carried with the radio. We have designed the DJ-580T to be user-friendly, but also sophisticated: It has the features you need, without any useless bells and whistles. This radio can receive 130-174 MHz, 420-474 MHz, and can be modified to receive AM from 118-142 MHz. Other outstanding features include cross-band repeat function, full duplex operation, backlit keypad, 8 scanning modes, CTCSS encode / decode, and DSQ for private paging.

The DJ-580T will deliver a solid 5 Watts of power with the optional 12V battery, and our EMS-8Z Remote Speaker Microphone offers remote control of memory channels and scanning features.

DJ-F1T / DJ-F1TH *Best of Both Worlds*

Small size combined with durability? It sounds like Alinco is breaking the rules again.

Most of the 'micro' handhelds that we've checked out seem to suffer from the same problems: Weak audio, flimsy construction, difficult to use keypads, and poor performance. The DJ-F1T overcomes these problems, offering reliability and performance that surpasses any handheld radio available today. Our unique 'clam shell' battery design allows for a full size keypad for convenient use, and a large speaker for outstanding audio quality. All this is packed into a cast aluminum frame and tough poly-plastic case that has set a new industry standard for durability.

Standard features include: 40 memory channels (odd splits on all), 3 output power levels, DSQ code squelch and private paging, illuminated DTMF keypad, CTCSS encode, Automatic Power Off, and 8 scan modes. The DJ-F1T will receive 130-174 MHz and can be modified to receive AM from 118-142 Mhz.

Better Products, Better Service. See for yourself why people are coming to ALINCO.

ALINCO ELECTRONICS INC.

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Torrance, CA 90501
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Other Great Products from ALINCO

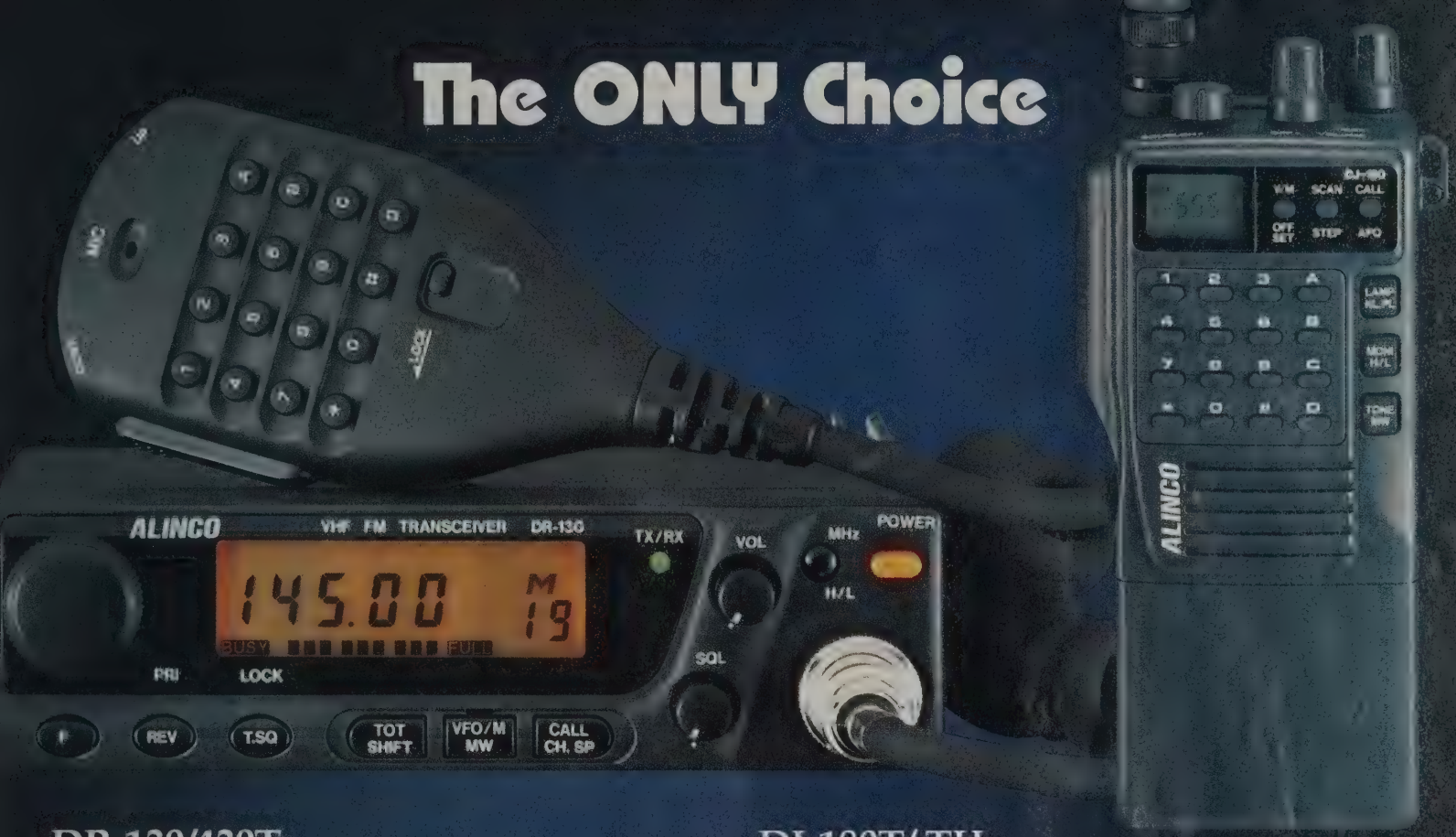
DJ-G1T

DR-600T

DR-130T

DJ-180T

The ONLY Choice



DR-130/430T:
Power Play

The DR-130T packs a big punch. This compact radio delivers 50 Watts of cool running power, and offers the durability and reliability that Hams have come to expect from ALINCO. The DR-430T is a 70-cm version of the same radio, and can supply 35 watts of output power.

These rigs offer 12 additional CTCSS tones (50 total) for compatibility with any repeater system. 20 memory channels are included, but if more channels are needed, simply plug in the optional EJ-19U module, and 100 memory channels will be available. All memory channels can store 'odd split' frequencies, and also store CTCSS encode/decode status.

A 1750Hz tone burst feature is included, and the LCD display has two modes: 'Commercial Display' which shows only the channel number, and 'Amateur Display' which shows channel numbers and frequency. The simple layout of the front panel offers maximum operating efficiency with no confusion, and a built-in Time Out Timer (TOT) can be programmed from 30-450 seconds.

DJ-180T/ TH:
Survival of the Fittest

The rugged DJ-180T features an ergonomics design that fits in your hand like a glove. Excellent sensitivity and great sound make this the radio of choice for demanding operators. The DJ-180TH (High power version) comes with a 12V battery and delivers 5 watts of solid output power.

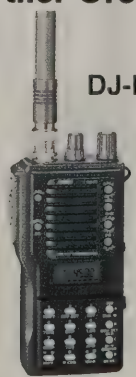
Ten memory channels come standard, and the unit can be upgrade to 50, or even 200 memory channels with the optional plug-in chips. The DJ-180T comes standard with CTCSS encode and decode, and also has an Automatic Power Off (APO) feature that extends battery life.

Odd Splits! This radio can store repeater offsets from 0 to 15.995 MHz. A different offset can be stored in each memory channel, and most other functions can also be stored independently in each memory channel.

— Other Great Products from ALINCO —

DJ-580T

DJ-F1T



DJ-G1T

DR-600

Check out the affordable technology of the 90's.
Check out Alinco.

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DEMAND THE BEST

DR-600T (144 MHz/440 MHz)

The outstanding abilities of the DR-600T set it apart from every other radio. Features like Wide Frequency Coverage, Excellent Intermod Rejection, Direct Frequency Entry from the microphone, Three Output Power Selections, Autopatch Memories, and 6 Scanning Modes make the DR-600T the radio of choice for demanding users. The Remote Mount Head allows for custom installation in most any vehicle, and also helps to deter theft.

This road-ready rig can also be remote controlled by any radio that transmits DTMF tones. This remarkable feature allows the DR-600T to act as a full-featured Cross-Band Repeater. For added control, a security code can be programmed that will allow control only by the control operator (you).

DJ-G1T

The DJ-G1T 2m HI from ALINCO scores another "First" for Amateur Radio technology. Our new "Channel Scope" feature opens new doors for Ham operators. Now it is possible to visually monitor up to 7 memory channels at once with just a glance at the display.

Also, the Channel Scope feature can be used to show band activity in the frequency domain, much like a Digital Spectrum Analyzer. Hunting for band activity just got easier.

Other outstanding features include 440 Receive, 80 Memory channels, AM Aircraft receive, 5 Autodialer channels, DSQ for private paging, Cross-Band Semi-Duplex, 6 Scan Modes, and Odd Splits on all Memory Channels.

Better Products, Better Service.
See for yourself why people are coming to ALINCO.

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— Other Great Products from ALINCO —

Handhelds STANDARD Mobiles

C-168A
C-468A

C-188A
C-288A

**Modifications for MAR/CAP transmit require an appropriate license.*

C-168A 2 Meter Handheld (left) • Very small! Covers 144–147.995 MHz transmit and 115–175 MHz receive, including (AM) aircraft band. Modifiable for MARS/CAP transmit*. 40-memory channels (optional 200 channel memory unit plugs-in). 7 types and 3 modes of scanning. Output: 2.5W output with included 700 mAh, 7.2V battery; 5W at 12V. CTCSS encode and decode , DTMF squelch with page. 4.9"h x 1.8"w x 1.2"d, 10 oz

C-468A • Same as **C-168A** but covers 438–449.995MHz transmit and 400–470MHz receive

C-188A 2 Meter Thin Handheld • Small–fits in shirt pocket, slide-cover protects keyboard. Covers 144–147.995MHz and 115–175MHz receive including (AM) aircraft band. Modifiable for MARS/CAP transmit*. 40 memory channels (optional extra 40 or 200 memory units plug-in). Ten 15-digit autodial memories. Output: 2.5W with included 700 mAh 6V battery; 5W at 9.6V. 7 types and 3 modes of scanning. CTCSS encode and decode. 5.8"h x 2.3"w x 1.0"d, 10 oz.

C-288A • Same as **C-188A** but covers 220-225 MHz transmit and 115–249 MHz (super-extended receive).

C-528A
C-228A
C-628A

C-558A

C-528A Deluxe Twin Band Handheld (left) • 2 Meters and 440MHz .Covers 144-147.995 & 438–449.995MHz transmit, 130–170 & 400-470MHz receive. Modifiable for MARS/CAP transmit*. Full-duplex cross-band repeat. 40 memory channels (20+20)+2 call+2 vfo. Output 2.8W (2m), 2.5W (440MHz) with std. 700 mAh, 7.2V battery; 5W at 12V. Five scan modes per band. CTCSS encode and decode included. DTMF squelch and page. 6.2"h x 2.2"w x 1.2"d, 17 oz

C-228A • Same as **C-528A** but 2m/220 MHz–covers 144–147.955 & 220–224.995 transmit and 130–174 & 220–245 MHz receive. Output: 2.5W on both bands.

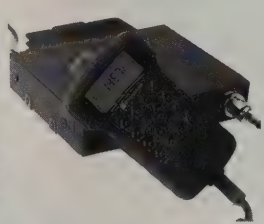
C-628A • Same as **C-528A** but 440MHz/1.2 GHz. Covers 438–449.995 tx, 400–470MHz rx and 1240–1300MHz transmit and receive. Output: 2.5W (440MHz), 1W (1.2GHz).

C-558A Deluxe Super Compact Twin Band HT (right) 2 Meters and 440MHz. Covers 144-147.995 & 438–449.995MHz transmit, 115–170 & 400-470MHz receive, including (AM) aircraft band. Modifiable for MARS/CAP transmit*. Full-duplex cross-band repeat. .40 memory channels (optional extra 40 or 200 memory units plug-in). Ten 15-digit autodial memories. Output 2.5W (2m), 2.5W (440MHz) with std. 700 mAh, 7.2V battery; 5W at 12V. Five scan modes; 3 types on each band. CTCSS encode and decode included. 5.1"h x 2.2"w x 1.2"d, 12.5 oz.

C-108A 2 Meter Handheld (right) • **TINIEST HANDHELD EVER!** Fits in your shirt pocket! 200mW output: plenty for hamfests, picnics, conventions, or working nearby repeaters. Extended receive: 1–175MHz including AM aircraft band. 20 memories. CTCSS encode built-in (23 tones). Four scan modes Powered by just two alkaline AA batteries. 3.2"h x 2.3"h x 1"d, 5oz

C-158A 2 Meter Handheld • Covers 144–148MHz. Modifiable for MARS/CAP transmit*. 20 memories. 7 scanning modes. CTCSS encode and decode built-in. Output 2W with std. 700mAh battery, 5W at 12V. 5.4"h x 2.2"w x 1.2"d, 13 oz.

C-178A Dual Band Handheld (left) • Up to 5W on 2 Meters and 50mW on 440MHz. Covers 144–148MHz and 438–450MHz transmit. Extended receive: 110–174 and 320–475MHz including AM aircraft band. Modifiable for MARS/CAP transmit*. 40 memory snap-in chip with optional 200 (or extra 40) memory chips. CTCSS encode and decode. Seven modes of scanning, including CTCSS scan. 2W/2m with standard 700mAH, 7.2V battery, 5W/2m at 12V. 4.9"h x 2.2"w x 1.2"d, 13 oz.



C-1208DA 2 Meter Mobile Mobile (right) • 50W of power totally controlled from the microphone! Remote the radio anywhere: the microphone has a large LCD display, all controls, and speaker. Super extended receive 100–200 and 250–520MHz including AM aircraft band. 100 memories. CTCSS encode and decode built-in. 10 DTMF autodial memories of 15 digits each. Plug-in ready without modification for high-speed 9600 baud packet (or 1200/2400). Six scan modes, including priority and CTCSS. Modifiable for MARS/CAP transmit*. 5.5 "w x 5.8"d, 1.7 lbs.

C-5718DA Twin Band Mobile (left) • 2 Meters and 440MHz with 110-199 and 250-499 MHz extended receive including (AM) aircraft band. Operate as one unit with an optional snap-on twin frequency display front panel, or remotely, out of the way, using the optional front panel extension cable. Also, control the radio remotely with the unique remote control microphone which has a back-lit keypad, twin LCD display and speaker–built-in! Power: 50W (2m) 40W (440MHz). 40 memories (optional 200 channel memory chip plugs-in). CTCSS encode and decode built-in. Crossband repeat mode. Full-duplex crossband transmit and receive. DTMF paging and coded squelch. 8 kinds of scan, including CTCSS scan–each band scans separately. Dual frequency receive: 2-VHF, or 2-UHF, or 1-VHF and 1-UHF. Packet ready for high speed, 9600 (1200/2400) baud and interface for both VHF and UHF–just add a TNC. Modifiable for MARS/CAP transmit*. 1.6"h x 5.5"w x 5.3"d, 2.2 lbs.

CCR-708A Communications Test Receiver with Spectral Display Scope • Full Covers 50–904.995MHz. LCD spectral display scope used for evaluating signal strength and tracking down near by interfering signals. 100 memory channels. AM, N/FM, and W/FM modes. Display range: 100 KHz, 250 KHz, or 1000 KHz. 13.8V DC or 120V with supplied AC adapter. 2.9"h x 7.1"w x 7.1"d, 4.6 lbs.

For Standard Prices & Accessories see Price List and check Index for other Standard information

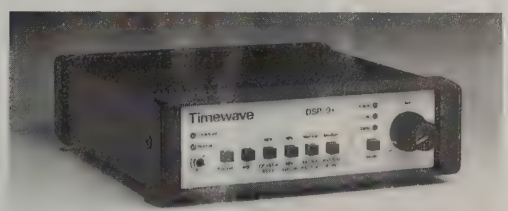
TIMEWAVE TECHNOLOGY INC.

Noise Killer Filters

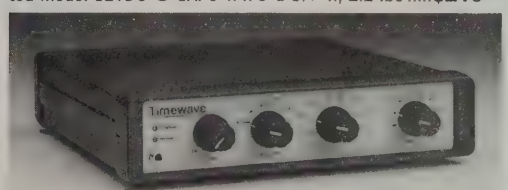
Advanced DSP Filters

Improve reception by simultaneously reducing random noise, heterodynes, reducing QRM and providing razor sharp audio for SSB and CW modes. The DSP filter features third generation 16 bit processing and 16 bit DSP A/D and D/A chip. Processor runs at 13 million instructions per second allowing multiple functions at the same time. A must for the weak signals and noisy bands as a result of the Low SUNSPOT CYCLE. All Timewave DSP filters feature simple installation in receiver audio output, and drive speakers and headphones directly.

DSP-9 Version 2.0 CW/SSB Filter • Push button selectable bandpass, automatic notch and random noise filters for SSB, CW and Data. SSB filter bandwidths: 1.6, 2.0, 2.4kHz. or 1.8, 2.4, 3.1 kHz, field programmable. CW filter bandwidths: 100, 200 and 500Hz with center frequencies of 600/750Hz or 400/500, field programmable. Reduces white noise, static, QRM, etc–dramatically! Excellent for HF and Satellite work. Helpful self test mode can be initiated by user. 12VDC @1A. 6"w x 6"d x 1¾"h, 2 lbs ..... **$169**^{00}



DSP-9 Plus SSB/CW/Data Filters* • Push button selectable bandpass, automatic notch and random noise filter forSSB, CW and Data SSB filter bandwidths 1.6, 2.0, 2.4,kHz or 1.8, 2A, 3.1 kHz., field programmable. CW filter bandwidths 100, 200, and 500 Hz. with center frequencies of 400, 500, 600, 800 Hz., any two field programmable. Optimum data filter for HF Packet, GTOR®, AMTOR, and RTTY. ALL data modes have selectable center frequencies that can be programmed by user. Default is USA standard 2210 Hz. AGC button for wider dynamic range, plus acts as an automatic CW boost/peaking enhancer. Aux audio output jack fordata. PTT input for break-in, CW sidetone, bypass and muting. Relay passes audio directly to speaker with pushbutton bypass or power off. Self ted mode. 12VDC @ 1A. 6"w x 6"d 1¾ "h, 2.2 lbs ..... **$219**^{00}



DSP-59 SSB/CW/Data filters* • Perfect for the Ham and SWL hobbyist. Features 225 combinations of high and low pass filters for voice and special modes. Over 300 CW and data filters (25 to 600Hz) allow the user to select almost any filter needed for a specific application, including RTTY, SSTV, AMTOR, G-TOR®, PACTOR, Packet, Satellite, EME, SSB, CW, Weather Fax and AM. Voice filters from 200 Hz (highpass). 13 CW center frequencies from 400 Hz. to 1.0 kHz on front panel. Push button selection of relay, bypass, AGC, HP/LP/BP, hetrodyne elimination and random noise reduction. Kills hetrodynes with notch up to 50dB. Dramatic random noise reduction from static, lightning crashes, white noise, line noise, etc. Marker for spotting the narrow CW filter, self test mode. Requires 12VDC @ 1A. 7½"w x 8"d x 1¾"h, 2.2 lbs..... **$299**^{00}

**G-TOR® is the registered Trademark of Kantronics*

Call the AES® BBS!

(414) 358-3472 (8-N-1 up to 14,400 bps)

Prices • Specials • Important Information • More!

BE-HAM SPECIAL

2 METERS IN YOUR SHIRT POCKET!

Actual size!

Here's the tiniest hand-held Amateur transceiver ever offered! Standard's C108A is truly the rig you'll want to carry with you all the time. Its 200 mW output is ample for hamfests, picnics, conventions — or even for working nearby repeaters. With its 100-175 MHz receiver, you can also monitor the public service, marine and aircraft (AM detector) bands along with your favorite 2-meter frequencies.

JUST LOOK AT WHAT YOU GET WITH THE C108A:

- 100-174.995 MHz receive, FM or AM detector
- 200 mW Transmit Power
- 20 memories; stores frequency, offset and CTCSS tone
- CTCSS built-in; 23 tones available
- Scan modes: 1 MHz, Full Range, Memory, and Memory-Scan-Memory; programmable for Pause and Busy
- DC Power: 2 alkaline AA penlight cells

PLUS Battery Save and Auto Power Off, Keyboard Lock. The C108A measures only 2.3"x3.2"x1", weighs less than 5 oz.—get one for your shirt pocket today!

ACCESSORIES:

CHP111	Headset microphone
CHP150	VOX microphone
CLC401	Standard soft case
CLC402	Deluxe soft case
CMP111	Speaker microphone
CMP113	Tie pin microphone
CMP115	Mini speaker microphone
CNB401	NiCad battery pack
CSA401A	NiCad battery charger

For more information on the C108A and other STANDARD products, please contact your nearest STANDARD dealer. Specifications, features and price are subject to change without obligation or notice.

STANDARD

Standard Amateur Radio Products, Inc.
P.O. Box 48480
Niles, Illinois 60714
Tel. (312) 763-0081 Fax (312) 763-3377

Everything you need's in the speaker/mic... *and* it delivers 50 watts, too!

A full featured 2-meter rig that fits anywhere, yet puts out a full 50 watts as well — that's Standards new C1208DA! With all controls and the large liquid crystal display in the speaker/mic, this rig can mount anywhere — no more compact car woes! The rig's under the seat, behind the dash, or in the trunk (with optional extension cable) — all you need is in your hand. All this, plus it's packet ready (up to 9600 baud) and includes wide range (100-200 and 250-520 MHz) receive, including AM aircraft.

HERE'S WHAT THE C1208DA GIVES YOU:

FREQUENCY RANGE:
Transmit: 144-148 MHz; CAP/MARS mod available
Receive: 100-199.995 plus 250-519.995 MHz, FM or AM

POWER OUTPUT:
50, 10 or 3 W, selectable

INTERMOD REJECTION:
None better!

MEMORIES:
100; stores frequency, offsets and CTCSS tones

CTCSS ENCODE/DECODE:
Built in!

DTMF AUTO DIALING:
10 memories of 15 digits each

PACKET READY:
1200, 2400 and 9600 baud!

FREQUENCY STEPS:
5, 10, 12.5, 15, 20, 25, 50 or 100 kHz

SCANNING:
6 modes, including priority and CTCSS

AUDIO MUTE:
-10, -20, -30 or -40 dB, programmable

All this, yet the C1208DA is only 5.5x1.2x5.8 inches, weighs only 1.65 lbs., and includes a quiet built-in cooling fan. Mobile mounting bracket and 9-foot (3 meter) power cord also included.

BE-HAM SPECIAL

C1208DA ACCESSORIES:

CAW560	Split cable for mic
CAW561	6' (2 meter) mic extension cable
CAW562	12' (4 meter) mic extension cable
CMU182	200 channel memory chip
CSA12	External speaker
CAW575	15' (5 meter) power cable
CAW576	9' (3 meter) power cable

FCC APPROVAL PENDING. For more information on the C1208DA or any Standard products, please contact your Standard dealer. Specifications, features and price are subject to change without obligation or notice.

STANDARD®

STANDARD Amateur Radio Products, Inc.
P.O. Box 48480
Niles, Illinois 60714
Tel. (312) 763-0081 Fax (312) 763-3377

WHAT TWIN-BAND RADIO'S SPEAKER-MIC DISPLAYS BOTH BANDS WHILE DELIVERING UP TO 50 WATTS?

The Standard C5718DA of course; the smallest, lowest price twin-band mobile radio that delivers all the features. Operate the C5718DA from its optional snap-on front panel with twin frequency display (CRC5700) or mount it under a seat or even in the trunk using the optional extension cable (CAW571 or CAW572).

- Unsurpassed intermod rejection.
- Built in Antenna Duplexer.
- Dual-frequency receive; two VHF, Two UHF, or VHF/UHF.
- Frequency Range: Receives 110-199.995 MHz (including AM aircraft) and 250-499.995 MHz.
- 50 Watts 2M, 40 Watts 70cm (3W Low, 10W Medium selectable)
- Memories: 40 memories (20 per band); stores frequency, offsets and CTCSS tones.
- 200 memory channel option, CMU182.
- CTCSS Encode/Decode standard.
- Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 Khz.
- Full Duplex cross band operation with CTCSS tones.
- Paging/Coded squelch.
- DTMF autopatch dialing, 10 memories per band, 15 digits.
- Eight kinds of scan, including priority and CTCSS.
- Back-lit Keypad and Display
- Auto mute opposite band, three settings (-6, -12 and -18dB).
- Cooling fan built-in.
- Size: 5.51"W 1.57"H 5.31"D
- Weight 2.2 lbs
- Mobile bracket and power cord (2M) included.
- MARS and CAP modification available (permit required).

STANDARD PIONEERS ANOTHER FIRST!! THE C5718DA IS PACKET READY.

Designed with packet in mind. Out-of-the-box high-speed, 9600 baud, interface for both VHF and UHF bands. Just connect your TNC to the C5718DA and you're on the high speed packet network. Also, operates at 1200 and 2400 baud equally well.

OPTIONAL ACCESSORIES
CRC5700 removable front panel with twin frequency display.
CAW570 split cable for mic.
CAW571 2M mic extension cable.
CAW572 4M mic extension cable.
CAW573 2M extension cable for the front panel (CRC5700).
CAW574 4M extension cable for the front panel (CRC5700).
Additional accessories available from your dealer.

SR STANDARD®

You can always count on...

AES®

to stock STANDARD® products for *Prompt Shipment*, and for *Service after the Sale.*

STANDARD®

C528A

Affordable deluxe Twinband H/T with 2 meters & 440MHz

Deluxe "Standard" C528A Twin-Band features include:

- *5 Watts output at 12 volts (direct 12 volts – no expensive adapter required)*
- *700 mAh 7.2 volt NiCad included • Automatic Power-off mode (selectable)*
- *Over 40 memories (20 + 20 "limited" + 2 call + 2 vfo) • Battery Save mode*
- *0.158uV receive sensitivity • Encode AND decode CTCSS subaudible tone*
- *Extended receive (130–170 MHz and 400–470 MHz) • Dual-receive mode*
- *Full-duplex crossband transmit and receive • DTMF paging/coded squelch*
- *Rugged construction • Separate volume and squelch controls for each band*
- *Each band scans separately • 5 modes + Busy + Pause (even CTCSS scan)*
- *Convenient crossband repeat mode (preset levels and selectable hang time)*
- *Pushbutton control of crossband repeat • Advanced design flexible antenna*
- *Other Versions:* **C228A** *(2m / 220 MHz),* **C628A** *(440 MHz / 1.2GHz)*

Your Best Bet for Standard® is AES®...
It's In Stock & We Service what we Sell!

STANDARD®

C558A

Elegance, Balance ..... & Twin Band Performance

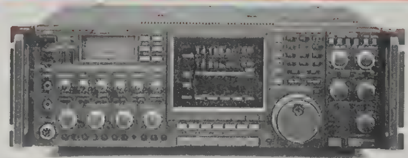
Deluxe "Standard" **C558A** 2m/440 Twin-Band features include:

- *Super small and powerful • Rugged construction • 5 Watts out at 12 volts*
- *700 mAh 7.2 volt NiCad included • Modifiable for MARS/CAP transmit*
- *40 memories on each snap-in chip • Optional 200-memory chips available*
- *Extended receive: 115-174 MHz (including AM aircraft) & 400-474 MHz*
- *0.158uV rx sensitivity • Encode & decode CTCSS subaudible tone built-in*
- *Full-duplex crossband transmit and receive • DTMF paging/coded squelch*
- *7 types/ 3 modes of scan • Even CTCSS scan • Each band scans separately*
- *Convenient crossband repeat mode: even preset levels & selectable hang time*
- *Pushbutton control of crossband repeat • Also built-in: 1750Hz tone burst*
- *Other Twin Band H/Ts that share batteries & most accessories with* **C558A**:
  C228A *(2m/220),* **C628A** *(440/1.2GHz), and* **C528A** *(inexpensive 2m/440)*

STANDARD AMATEUR RADIO PRODUCTS, INC. • P.O. Box 48480 • Niles, IL 60648
For further info call • **1-312-763-0081**
Standard is the world's largest manufacturer of VHF–UHF Amateur Radio equipment!

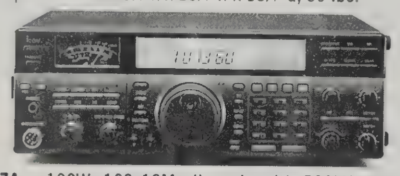
AMATEUR ELECTRONIC SUPPLY® Milwaukee • Wickliffe • Orlando • Clearwater • Las Vegas...
all STANDARD® models in Stock at all Locations!

ICOM Amateur Radio Equipment



IC-781 • 160-10M all mode with 100kHz-30MHz receive, built-in antenna tuner and AC supply. 10-150W output. Dual VFOs, 99 memories and scan. 5" CRT spectrum scope shows relative strengths of signals, clear spots, pile-ups, etc. Displays VFO frequencies, memory contents, function menus, notes, 15 operational screens, packet and AMTOR data. Dual Watch monitors two frequencies. RF speech processor, keyer and QSK. Noise blanker, W/N CW and SSB filters. Audio peak filter, twin PBT, CW pitch. RIT/XIT, receiver preamp and attenuator. 5⅞"h x 16¾"w x 16¼"d, 51 lbs.

ICOM IC-765 • 160-10M all mode with 100kHz-30MHz receiver, built-in automatic antenna tuner and AC supply. Full duty cycle, 10-100W output. Direct keyboard entry, dual VFOs, 99 memories and scan functions. RF speech processor, electronic keyer and QSK. IF shift, notch, CW pitch and CW narrow filter. Noise blanker, RIT/XIT, receiver preamp and attenuator. CI-V for computer control. 5⅞"h x 16¾"w x 16¼"d, 39 lbs.



IC-737A • 100W, 160-10M all-mode with 500kHz receiver, built-in automatic antenna tuner, electronic keyer, automatic antenna selector. Full QSK and VOX. Keypad for direct frequency entry and band selection, D.D.S. 101 memories, memo pads, three types of scanning. Double band stacking register (DBSR), PBT and notch, RIT and ΔTX functions. Speech compressor, 10dB preamplifer and 20dB attenuator, all mode squelch, hand microphone. 13" x 4½" x 11¼", 18 lbs.

IC-736 • Looks like IC-737A. Covers HF + 6 meters with 100 watts output and Internal tuner. Internal AC power supply, 100% full duty cycle, PBT and notch filter. Newly designed D.D.S. 1 Hz tuning resolution. 13"w x 4½"h x 11¼"d, 23 lbs.

IC-728 • 100W 160-10M all-mode, FM with optional module; 30kHz–33MHz receive. Dual VFOs, 26 memories DDS, PBT, speech compressor, three scan functions, band stacking register, QSK, RIT, noise blanker, 10dB preamp and 20 dB attenuator, all mode squelch. 3¾"h x 9⅛w x 9½"d, 10 lbs.

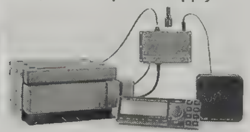
IC-729 • Like IC-728, adds 10W 6 meter transmit, and receive ranges of 30kHz–33MHz and 46.2–61.1MHz.

IC-735 • Compact 160-10M all-mode with 100kHz-30MHz receive. Dual VFOs, 12 memories, programmed and memory scan. 10-100W output, 100% duty cycle. VOX, AF speech compressor, full CW break-in, RIT, passband tuning, notch. Preamplifier and attenuator, noise blanker. Microphone included. 12V DC @ 20A. 3¾"h x 9½"w x 9½"d, 12 lbs.

ICOM IC-725 • Compact 160-10M SSB/CW (AM receive) transceiver with 30kHz to 33MHz receive. 10 to 100W output. Dual VFOs, 26 multi-function memories. Band, memory and memory mode scan. D.D.S. Full break-in CW, RIT, receiver preamplifier and attenuator. All mode squelch, noise blanker. 13.8V DC @ 20A. 3¾"h x 9½ "w x 9½ "d, 10 lbs.

ICOM IC-707 (left) • 160–10M all mode with 500kHz–30MHz receive (FM optional). Power variable (5–100W, 25W AM). Dual VFO's, 30 tunable memories with 5 for transmit/receiver "split" operation. Large LCD display, speaker in front. Band Stacking Registers, 10dB preamp, 20dB attenuator, RIT, noise blanker. 12V DC @ 20A. Small! – 9.4"w x 3.7"h x 9.4"d. 9 lbs.

IC-970A (right) • **V/U Dual Band** – 25W, 2m/440MHz all-mode with 1.2 GHz and extended receive options. 396 memories – 10 for satellite work. 5 call channels. Auto frequency tracking. Simultaneous dual band receive with multiple main and sub-band scan modes. **IC-970H** • (45W), built-in power supply.



IC-275H/475H/575H (left) • Similar appearance and function. Dual VFOs, 99 memories, scanning, priority. Packet compatible. Speech compressor, full or semi break-in, power variable. Noise blanker, notch filter, PBT, narrow or wide filter switch, RIT, variable tone, all-mode squelch. 3¾"h x 9½"w x 9½"d, 13½ lbs.

IC-275H • 2m, 10-100W, 12V/20A. **IC-475H** • 440MHz, 10-75W, 12V/20A. **IC-575H** • 28/50MHz, 100-100W, 12V/20A

IC-901 (right) • Covers 2m (50W) and 440MHz (35W). Features a detachable remote controller to operate dash mounted, as a remote controlled under seat installation, or trunk mounted with optional interface/fiber optic-link. Stack 5 optional band units: available for 6M, 10M, 220MHz,1.2GHz and 144MHz SSB/CW.

IC-DELTA-100H • High performance triple band VHF/UHF FM. Covers 2 meters, 440MHz and 1.2GHz. Power out: 50W (2m), 35W (440MHz), 10W (1.2GHz). Eight selectable band combinations, 642 memories. Multiple scanning functions. Detachable control panel and full remote control microphone. 14 DTMF autodial memories, PL tone encode included. Three external speaker jacks. 2"h x 5½"w x 7"d, 4½ lbs.

IC-281H • 2 meters (50W). transmit and receive and 440 MHz receive. 70 memories (allocateable), 10 scratch pad memories. Packet plug and play–9600 BPS modulation, data filter circuitry. Auto repeater functions, auto channel advance, remote control microphone. 1⅝" h x 5½"w x 6½"d, 2.1 lbs.

IC-2700H • 2M (45W), 440MHz (35W). Independent dual bands, 106 memories. Remotable with "talk back", detachable control panel and remote control mic. V/V, U/U, V/U. Auto repeater shift, built-in pager, code squelch, PL encode. DTMF autodialer, timeout timer, auto power off. Opt. tone scan, voice synth., infrared mic. 12VDC @ 10.5A. 2"h x 5½"w x 5½"d, 3.2 lbs.

IC-2340 • 2 meters (45W), 440MHz (35W). Independent dual bands, 110 memories. Remotable with "talk back". Auto repeater shift, built-in duplexer and PL encode. DTMF autodialing. Optional tone scan, voice synthesizer and remote control microphone. 12VDC @ 10.5A. 1⅝" h x 5½"w x 6½"d, 2.9 lbs.

IC-3230H • 2m/440MHz (138-174/440-450MHz rx), 45W/35W. Dual VFOs, 42 memories. Optional remote control and voice read back. 12V DC @ 8A.

IC-228H • 2M (45W). Multi-color display. 20 memories, multiple scan functions, priority watch. Built-in PL encode. TTP microphone. 12V DC @ 10A. 2"h x 5½"w x 5½"d, 2.4 lbs.

IC-28H • 2M (45W) Large display, minimum keys and switches. 21 memories, PL encode, TTP microphone.

New **IC-820H** • Compact, 2m/440MHz all mode. Convenient satellite communications with satellite. memory/tracking functions.

IC-DELTA-1A (A) • **Tri Band:** 2m/70cm/1.2GHz. Covers 140-150MHz, 440-450MHz and 1240-1300MHz. Extended receive 138-174MHz for NOAA and public service broadcasts. 2W out on 2m and 70cm; 5W with optional battery; 1W out on 1.2GHz. 78 memories (26 per band) store frequency, offset, PL tone and digital squelch settings. Four DTMF autodialing memories, all PL tones, 24-hour clock with on/off timers. Separate controls and functions for each band. 5.7"h x 2.3"w x 1.9"d.

IC-T21A (B) • 2 meters, 6W @ 13.5VDC. Features bonus receive band and six hours operating time. 114 memories, 33 channels/second scan rate, auto low power, full crossband duplex. Battery capacity indicator, selectable DTMF speed, auto repeater shift, tone scan, backlit keypad. 5¼"h x 2⅛"w x 1⅜"d, 13 oz. **Model IC-T41A** covers 440MHz.

IC-W21AT (C) • **Dual Band:** 2 meters/440MHz – 144-148 tx, 138–174MHz rx and 440–450MHz tx/rx. 2.5W. 70 memories, and one repeater quick memory per band. Cross-band duplex, output based on strength of received signal. DTMF pager, CTCSS encode, four DTMF memories. 4⅞"h x 2¼"w x 1⅞"d.

ICOM IC-W2A (D) • **Dual Band:** 2m/440MHz, 2W with extended receive capability for commercial and aircraft. Simultaneous dual band receive, full duplex crossband operation. 30 memories and 1 call channel per band. Built-in pager and code squelch, high speed scan, priority watch, programmable offset, 24-hour clock and timer. Autodialer with four DTMF memories. 2⅛"w x 6¾"h x 1⅜"d, 1.2 lbs

ICOM IC-V21AT • 2 meters/220MHz, 5W @ 13.8VDC. Receive two signals on the same band. 70 memories. Built-in pocket beep, pager, code squelch, tone squelch. Repeater quick memory. Backlit keypad, auto output power control. 900mAh battery, backlit keypad. Opt. whisper mode. 4⅞"h x 2¼"h x 1⅞"d.

ICOM ICX2A • 440MHz (5W) and 1.2GHz (1W). 62 memories. Simultaneous receive on both bands with separate controls. Built-in pager/code squelch and PL encode and decode. 2⅛"w x 6¾"h x 1⅜"d, 1.2 lbs

ICX-21AT • 440MHz (5W) and 1.2GHz (1W). Bonus 2m receive, five power levels, 70 memories. Built-in pager/code squelch, PL encode, pocket beep, tone squelch. Repeater quick memory, auto power out, backlit keypad. 900mAh battery. Optional whisper mode. 4⅞"h x 2¼"w x 1⅞"d.

ICOM IC-2GXAT (E) • 2 meters, 7W @ 13.5VDC. 70 memory channels, 700mAh battery, auto repeater operation, tone scan, DTMF redial, memories, 350mW of audio, selectable DTMF speed, built-in PL encode/decode, 35mA current drain.

ICOM IC-2iA (F) • 2 meters. ultra-slim, 2.5W. 144-148MHz transmit, 138–174MHZ receive. Selectable multi-function or simple mode. 102 memories, 16 DTMF autodial memories, programmable band and memory scan, 24-hour clock. Internal removable 400 mah battery pack. 2.4"w x 3.6"h x 1.2"d, 9.1 oz. **Model IC-4iA** covers 440-450 MHz.

Due to foreign currency fluctuations, prices are not shown on this page. Call Toll Free for latest Sale Prices, Monthly Specials, Coupons, etc.

Feel The Comfort Of Extended Operations With The IC-T21A!

IC-T21A
VHF FM
Transceiver

BONUS RECEIVE BAND!

IC-T41A
UHF FM
Transceiver

Maximum Comfort

Elastomer Construction – This special material provides a comfortable, positive grip. The compact design fits the natural curve of your fingers and hand – especially welcome during long operating times.

Backlit Keypad – Ample spacing between keys for positive, error free operation.

Large Display – Indicates 17 different functions, battery capacity and subband frequency.

Full Crossband Duplex Operation

Dual Band Receive Capability – Permits reception of another band (i.e.: 440 MHz on the IC-T21A).

Full Crossband Duplex Operation – Possible with the unique "whisper mode" microphone (standard) for telephone type QSO's.

6 Hours Operating Time*

Low Power Consumption – Consumes only 8 mA while standing by.

Auto Power Control – Conserves the battery by monitoring the repeater signal strength and selecting the best matching output power from 5 levels (down to 15 mW).

Auto Low Power Function – Automatically selects 15 mW just before battery exhaustion so you can complete your QSO.

* 5.5 to 6 hours with 1:1:8 duty cycle (Tx high : RX : Standby)

Battery Capacity Indicator – Shows battery capacity.

New Scanning Standards

Ultra High Speed Scan – 3 to 4 times faster than most other handhelds (33 channels/sec., 12.5 memory ch./sec.).

Bonus Band – Can be scanned while the main band is being scanned (e.g.: 70 cm for the IC-T21A).

Backlit Keypad!
With 4 selectable levels of contrast!

6 Priority Watch Modes – Check for other signals while operating on a VFO frequency.

Ultra-Convenient Repeater Operations

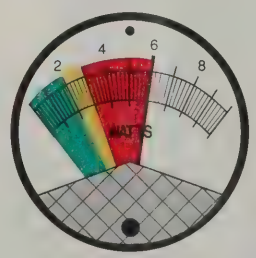
Subaudible Tone Scan – Detects, displays *and programs* the tone frequency into the VFO. Permits access to a repeater when you don't know the tone frequency.

Auto Repeater Function – Automatically activates repeater settings (duplex ON/OFF, duplex direction, tone encoder ON/OFF) when the operating frequency falls in the repeater output range.

Repeater Memory – Quickly recall settings of your last worked repeater (RPT-M key).

5 DTMF Memories – Automatically dial your favorite telephone numbers.

Selectable DTMF Transmission Speed – Adjust the IC-T21A/T41A to the capabilities of the repeater (5 cps, 2.5 cps, 1.6 cps, 1 cps).



Powerful 6 W Output Power*

Our newly designed SC-1257 power module provides all the power necessary to reach fringe areas. Accepts 4-16 V input.

* With a 13.5 V DC power source.

Innovative Memory Functions

114 Memory Channels – Store *all* repeater information.

Memory Select Channels – For quick access, up to 30 can be designated Memory Select Channels.

Memory Transfer – Quickly transfers a memory channel's contents to VFO. Useful for searching for signals near a memory channel.

EEPROM – Memory information is retained virtually forever.

And More!

- Includes Flexible Antenna, Belt Clip, Handstrap, Rechargeable Ni-Cd Battery Pack and Charger
- Built-in Pager, Code Squelch, Pocket Beep & Tone Squelch

ICOM America, Inc., 2380-116th Ave. N.E., Bellevue, WA 98004
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For more information call our brochure hotline: (206) 450-6088

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ICOM

ICOM's IC-2GXAT . . . Powerful Versatility In A Rugged, User-Friendly Handheld.

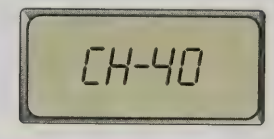
NEW
Limited Time Offer:
Special introductory pricing!
Call your dealer for details.

The IC-2GXAT offers surprisingly simple operation with the features and performance amateurs have come to expect from Icom products. Whether you're a beginner or a seasoned veteran, you'll quickly fall in love with this 2 meter handheld.

IC-2GXAT
2 Meter
FM Transceiver

SIMPLE OPERATION

Channel Operation – display can be set to indicate memory channel numbers only. This keeps frequencies secret, restricts operating frequencies or simplifies operation for an unfamiliar user.



Auto Repeater Operation – automatically activates the correct duplex direction when the receiver frequency tuned is within the repeater output frequency range.

Tone Scan – scans for, detects and sets the subaudible tone frequency to enable communication with another station that is using subaudible tones.

DTMF Redial – for quick and easy access to autopatches.

User Friendly Keyboard – uncluttered, user-friendly design for ease of operation.

ADVANCED FEATURES

Power Saver – reduces the current drain to 35 mA (avg. Rx) for battery conservation and extended operating time.

Low Power Option – switch to 1 W output power to extend your operating time when high power isn't required.

40 Memory Channels – store **all** repeater information independently.

Memory Transfer – the contents of a memory channel are transferred into VFO, **and the VFO mode is automatically selected,** to assure quick and easy QSY'ing.

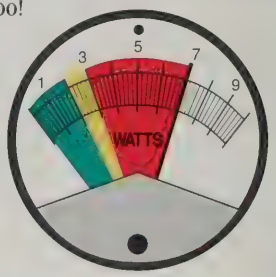
5 DTMF Auto Dial Memories – for quick and easy autopatching to frequently used telephone numbers.

Selectable DTMF Autodial Digit Duration – adjust your DTMF speed to the decode capabilities of the repeater.

Need more information?
Call our brochure hotline:
(206) 450-6088

MAXIMUM POWER

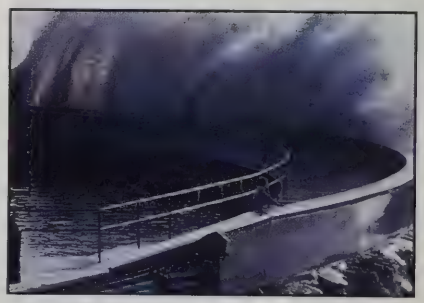
7 W Output Power – one of the highest powers available in a handheld (nominal with 13.5 V DC or the optional BP-132A battery pack). The BP-132A battery pack provides more than enough power to reach those fringe areas, and a long lasting 600 mAh too!



DURABLE CONSTRUCTION

Die-cast Aluminum Rear Case – will withstand the demands of rugged outdoor use.

Splash Resistant Body – maintains performance in harsh outdoor environments.



Rated JIS II for splash resistance, the IC-2GXAT is built to withstand rugged outdoor use.

OTHER GREAT FEATURES

- High Sensitivity: 0.18 µV for 12 dB SINAD
- Multiple Scan Modes
- Monitor Function
- SET mode to customize transceiver operation
- Display lighting with 5 second timer
- Subaudible tone encoder, tone squelch and pocket beep
- Optional pager and code squelch
- BP-160 (3 W, 700 mAh) battery pack, wall charger, belt clip and hand strap come standard
- 8 tuning steps (5, 10, 12.5, 15, 20, 25, 30 or 50 kHz)
- Call Channel
- Icom compatible accessories

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Experience the Quality®

ICOM®

Microphones • Headsets • Accessories

A rugged, lightweight boomset designed for long wearing time during contests, etc. The headband has detents on each side for adjustment, and is fully padded for comfort. The vinyl earpads are also heavily padded, seal out noise, and are removable for washing. The flexible microphone boom adjusts to about any location and folds up for storage. Specify HEIL HC-4 or HC-5 mic cartridge (below) **$122.00**
Adapter cables for ICOM, KENWOOD or YAESU transceivers ..... **ea. $13.00**

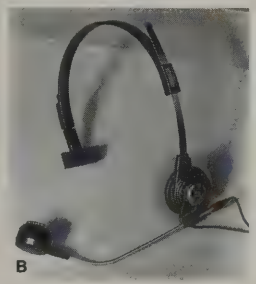
HEIL – SA-1 Compact Sound System

This is a an ingenious compact sound system that improves audio to allow operators to do a better job of hearing weak signals. It makes it easier to sort out the rare ones, and provides high quality audio like never heard before from amateur radio transceivers, communications receivers, handhelds or scanners.

Normally, the speaker built into radios as well as external accessory speakers are very inexpensive transducers. Their inherent low efficiency, poor frequency response and high distortion levels aren't able to produce high quality audio.

To overcome poor audio, the SA-1 is designed with a high quality 5W amplifier driving a 4" broadband speaker that works into a ported cavity. A pre-amplifier circuit contains a variable equalizer allowing tonality adjustment of the received audio for maximum articulation. The SA-1 requires 12V DC @ 600 ma for operation. It comes with an audio input cable, DC input plug and hookup sheet.... **$89.90**

A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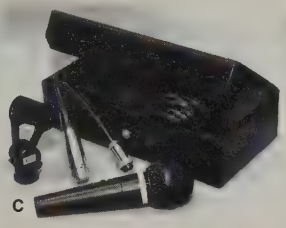
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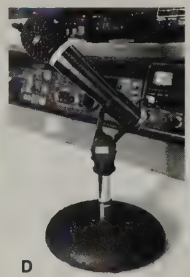
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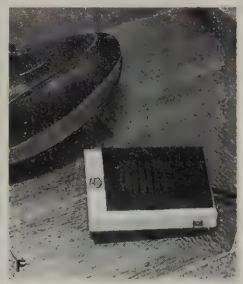
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BM-10 Dual Boomset (A) • A specially designed communications boomset with dual headphones and microphone with choice of HEIL cartridges. Weighing only 8 oz., the headpieces are soft and comfortable for prolonged use in contests and DXpeditions. Due to the special rim design of the earphone, they limit external noise–so desirable in multi-op contest setups The entire boomset is extremely versatile allowing removal/adjustment of each head piece or microphone boom to suit your needs, yet it remains sturdy to meet the demands of extended hours of operation. Specify HC-4 or HC-5 microphone cartridge (described below) **$71.90**

BM-10 Boomset • wired for ICOM, KENWOOD or YAESU (specify), also specify HC-4 or HC-5 microphone cartridge (described below) **$85.90**

BM-5 Single Boomset (B) • A single headphone version of the BM-10. Great for mobile use or for those that desire just one side–allowing for monitoring other activity. Specify HC-4 or HC-5 microphone cartridge (described below) **$64.90**

BM5 Single Boomset • wired for ICOM, KENWOOD or YAESU (specify), also specify HC-4 or HC-5 microphone cartridge (described below) **$69.90**

HM-10 Microphone (C) • A hand-held studio-style microphone with desk stand or boom mount options and choice of HEIL cartridges. Operate PTT or VOX, it's designed to work with virtually any late model transceiver. Specify for ICOM, KENWOOD or YAESU, also specify HC-4 or HC-5 cartridge (below)..... **$85.90**

HM-10 DUAL • Amateur Radio's *ultimate* microphone. Similar to the HM-10 but has *both* HC-4 DX element and HC-5 Full Range microphone cartridges built-in, and switch selectable. Specify for ICOM, YAESU or KENWOOD **$131.90**

TB-1 Table Base (D) • for HM-10 microphones. 6" high, heavy (2 lb., 10 oz cast base with non-skid cork feet. *Pictured with microphone, not included* **$12.95**

MA-1 Boom and Clamp Assembly (E) • for HM-10 microphones. Boom is adjustable 6" to 24". Attaches to desk or shelf, or hangs from ceiling. Swivels 360°, and places HM-10 or DUAL TEN microphone exactly where needed. Use FS-1 footswitch for convenient, hands free PTT operation..... **$49.95**

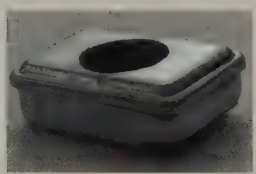
FS-1 Foot switch (F) • Foot control of PTT function of any transmitter. Non-skid rubber pad, top and bottom, supplied with 7 ft. cable and 1/4" phone plug. **$24.95**

HEIL – Replacement Microphone Cartridges

Most communications microphones today were designed for public address – not for SSB, with the frequency response needed for getting through pile-ups, or providing maximum voice clarity. If you aren't satisfied with the "sound of your station" you can solve this problem by replacing the cartridge in your microphone with a Heil Key Element for a dramatic improvement. It's tiny in size, and easily replaces existing cartridges in most microphones.

HEIL HC-4 – The DX Dream Machine

The replacement microphone cartridge for Contest and DX operators. It's engineered with a high-pitched, pile-up busting frequency response.of 500Hz–3800Hz with a 10dB peak at 2000Hz, and a sharp 12dB per octave roll off at 500Hz. Provides your rig with excellent clarity and more punch for getting through the pile-ups. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: .530"d x .850"w x .310"h... **$28.90**



HEIL HC-5 – The Key Element

The replacement microphone cartridge for everyday Rag Chewing. Engineered with full range articulation and maximum voice clarity. Not mushy, bassy paging-type audio, but very clear, easy to understand SSB audio. Response: 350Hz–4000Hz. with a sharp roll-off under 300Hz and above 3100Hz with a peak at 2100Hz. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: .530"d x .850"w x .310"h... **$28.90**

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KENWOOD Amateur Radio Equipment

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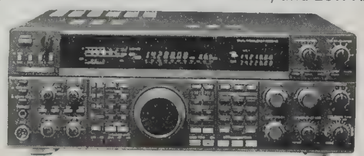
The World's smallest HF Transceiver!

KENWOOD TS-50S • Compact all-mode, 160-10M with 500kHz-30MHz receiver, 100 memories and scanning functions. 100W output CW/SSB/FM, 25W AM. Dual VFOs, programmable function keypad, large LCD display with dimmer, convenient menu programming, computer controllable. DDS with "Fuzzy" control logic. RIT, TF-set, IF shift, AIP, CW reverse, all-mode squelch, noise blanker. Selectable full or semi break-in . 12V DC @ 20A. 2.4"h x 7.6"w x 9.32"d, 6.4 lbs

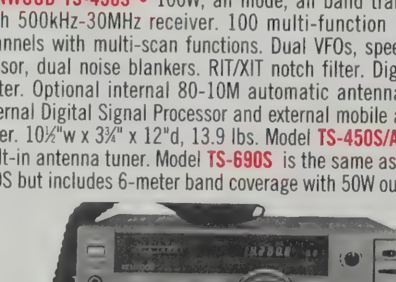
KENWOOD TS-60S • Compact all-mode, 6-meter tranceiver. Looks like, and features/specifications same as the TS-50S except power is 90W in SSB/CW/FM modes, and 23W AM.



KENWOOD TS-950SDX •150W, 160-10M all-mode with 100kHz-30MHz receiver and built-in antenna tuner. 50V MOS FET final amplifier. Dual receive, 100 memories, scanning. Speech processor, QSK semi-break-in, IF VBT, AF VBT, SSB slope tuning. Receive/transmit DSP with 23 position AF digital filter, auto AGC, 500 Hz CW filter in sub-receiver. DDS. Memory keyer, remote key pad, speaker outputs for main and sub receiver. Filters: 1st/2nd IF 500Hz, 2nd IF 250 Hz, 6kHz AM, 2.4kHz SSB. Selectable tone or CTCSS, computer interface, AC supply, speaker. 5.5"h x 15.8"w x 15.75"d, 50.7 lbs

KENWOOD TS-850S • 100W, all-mode 160-10M transceiver with 100kHz to 30MHz receiver. VFO or keypad frequency entry. Optional internal antenna tuner and external Digital Signal Processing (DSP) units. 10 Hz step dual VFOs, multi-mode scanning, full and semi-break-in CW, interference reduction, keyer, dual noise blanker, squelch, built-in speaker, 100 memory channels, and RIT/XIT. Hand microphone supplied. Requires 13.8V DC @ 20A. 13"w x 4¾"h x 13⅛"d, 24 lbs. Model **TS-850S/AT** has a built-in antenna tuner.

KENWOOD TS-450S • 100W, all mode, all band transceiver with 500kHz-30MHz receiver. 100 multi-function memory channels with multi-scan functions. Dual VFOs, speech processor, dual noise blankers. RIT/XIT notch filter. Digital bar meter. Optional internal 80-10M automatic antenna tuner, external Digital Signal Processor and external mobile antenna tuner. 10½"w x 3¾" x 12"d, 13.9 lbs. Model **TS-450S/AT** has a built-in antenna tuner. Model **TS-690S** is the same as the TS-450S but includes 6-meter band coverage with 50W output.



KENWOOD TS-140S • 100W, 160-10M all-mode with 500kHz-30MHz receiver. VFO tuning or with up/down frequency switches. Dual VFOs, 31 multi-function memories, programmable memory and band scan, programmable band marker. 10 memories store tx/rx frequencies independently for repeater operation. Noise blanker, IF shift, RIT, speech processor. QSK or semi CW. 13.8V DC @ 20A. 4¼"h x 11"w x 12"d, 13 lbs.

TS-790A • Three band VHF/UHF all-mode with 2m and 440MHz standard; 1.2GHz with optional module. Power: 45W (2m), 40W (440 MHz); 10W (1.2GHz). Dual VFOs for each band, dual displays. Keyboard entry, 59 memories, scanning. Dual reception of 2M/440MHz 2M/1.2GHz or 440/1.2GHz bands. Speech processor, IF shift, CW narrow filter. Full duplex, doppler frequency correction, optional computer interface. Requires 13.8V DC @ 15A. 4¾"h x 13"w x 13"d, 20 lbs.

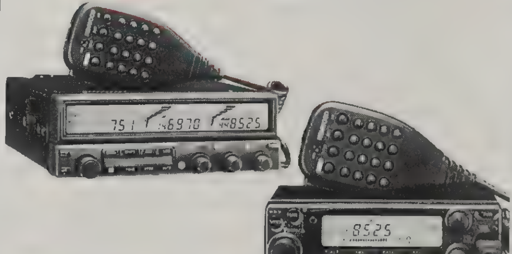
TM-255A • VHF all-mode for 2 meters. Covers 144–148MHz, modiflable for MARS/CAP, 100 memory channels plus one call channel. Power: 45/5W. Features: DDS, built-in 9600/1200 baud packet data terminal. AIP, IF shift, noise blanker. CTCSS encode, decode optional. DTSS and pager function, tone alert system with elapsed time indicator, S-meter squelch, all mode squelch, TXCO temperature compensated crystal oscillator.

TM-455A • Same as TM-255A but 430–440MHz.

FM Mobiles • 20 full-function memories CTCSS encode. Tone alert, auto power off and timeout timer. Band and memory scanning with selectable scan steps and memory channel lockout. 5½"w x 1⅝"h x 6¾"d, 2¾ lb.

TM-241A • **2 Meters**–118-173.99 receive (includes aircraft AM), 144–148MHz tx. Selectable 5/10/50W output.

TM-441A • Same but, **440MHz**, 35W output
TM-541A • Same but, **1200MHz**, 10W output
TM-331A • Same but, **220MHz**, 25W output



TM-251A (right) • 50W, 2 meter transceiver with 70cm receiver. 41 memory channels (up to 200 optional. Dual band receive capability, and packet compatibility for 1200/9600 bps. Programmable VFO, full- duplex cross-band repeat. CTCSS encoder, 10 DTMF memory (15 digits). Auto repeater offset, multiple scan modes. Large multi-function LCD with 5 step dimmer, channel display number. Time-out timer. DTSS with page function, digital recording system. S-meter squelch

TM-451A • **440MHz** with a 2 meter receiver, 35W

TM-742A (left) • 2M/440MHz **dual/triple band** FM mobile: opt. band units for 1.2GHz, 220, 28 or 50MHz. 2m: rx 138-173MHz; tx 144-148MHz, modifiable for MARS/CAP. 440MHz :438-449.995 MHz. Output: 2m (50W), 2m (35W.). Dual watch for simultaneous 2m/440 receive. Direct entry from mic. 100 memories/band, programmable memory and dual scanning with lockout and priority. CTCSS encoder, selectable full duplex, operates as a cross band repeater with mod. 13.8 V DC @ 11A. 2"h x 6"w x 8"d, 4 lbs.

TM-642A covers 2m (50W)/220MHz (25W)
TM-942A covers 2m/440MHz and 1.2GHz (10W)

Call Toll Free for latest Prices, Specials, Coupons, etc.

KENWOOD TM-733A • 2m/440MHz. 144-148MHz transmit; 118-174MHz receive and 438-450 transmit/receive. 72 multi-function memories. AIP, auto simplex checker, auto repeater offset, six-in-one memory, packet connection. Can operate as a cross band repeater, VHF + VHF, or UHF + UHF. Automatic band change, dual channel watch, full band or programmable band scan, lockout. DTSS, pager function clone function. 1-9/16 x 5-1/2" x 6", 2.6 lbs.

TH-22AT and TH-42AT FM Handhelds

MOS FET low voltage power module provides 3W (22AT), 2.5W (42AT) or 5W with optional battery. 41 E²PROM channel memories (including one call channel); odd offset capability in one memory. Selectable memory channel number mode. Multiple scan functions (VFO/call/memory); carrier or time-operated scan stop modes, busy channel lockout. Battery saver, time out timer. CTCSS encoder. Optional DTSS with pager function, DTMF memory function and CTCSS decoder. Cloning function. 2-3/16 "w x 4-5/8"h x 1"d, 9 oz.

TH-22AT • **2 meters:** 136-174MHz rx, 144-148MHz tx. 3.0W out

TH-48A • **440MHz:** 438-450MHz transmit and receive. 2.5W output.

TH-28A and TH-48A FM Handhelds

Similar Features: Single band transmit, dual-band receive. Six character alphanumeric LCD display, 40 multi-function memories, band or memory scanning. 15-digit autodialer with 10 memories. Tone alert system with time indicator. Digital clock, CTCSS encode/decode, 10 minute timeout timer. 1.9"w x 4.6"h x 1.5"d, 12 oz

TH-28A • **2 meters:** 118-174MHz receive, 144-148MHz transmit, 438-450MHz UHF receive. 2.5W output, 5W with optional battery.

TH-48A • **440MHz:** 438-449.995MHz transmit and receive, 136–174MHz VHF receive. 2.0W output, 5W with optional battery.

TH-78A Dual Band FM Handheld

2 meters & 440MHz; 144-148 tx, 118-174MHz rx and 438-450MHz tx/rx. 2.5W output on 2 meters, 2.0W output on 440MHz, 5W out on both bands with 12V source or optional battery. 50 multi-function memory channels, 2 call channels. Dual receive with large dual six character LCD display, separate volume and squelch for each band, full-duplex, cross band repeat function, dual band scan, built-in DTSS and pager. Auto power off, auto battery save and 10 minute timeout timer. Four selectable power output levels, auto power off, auto battery save, 10 minute timeout timer. CTCSS encode/decode, 15 digit autodialer. 1.9"w x 5.3"h x 1.6"d, 15 oz.

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Kenwood's TS-50S: Awesome HF Versatility

TS-50S
HF TRANSCEIVER

For the Amateur Radio enthusiast, going "beyond bounds" is what it's all about. That's why Kenwood created the TS-50S, the world's smallest and smartest HF transceiver. The choice is yours: you can mount it in a vehicle, take it on a DX-pedition, or even install it permanently as a base station transceiver. Yet despite its size, the TS-50S provides a maximum output of 100W and the sort of sophisticated features normally found only inside a shack. Take for example the 100 memory channels for independent storage of transmit/receive parameters, the microprocessor-controlled DDS with innovative "fuzzy" control, and Kenwood's own AIP for superior dynamic range. There's also a powerful menu system, IF shift and CW reverse mode for interference reduction, TF-SET, and a noise blanker--plus everything you need for split-frequency operations. So, if you want HF operation beyond bounds, check out the TS-50S at your favorite authorized Kenwood Amateur Radio Dealer today!

Features
- 500kHz-30MHz general coverage receiver
- DDS(Direct Digital Synthesizer) with fuzzy logic control
- Large LCD panel with digital bar meter
- Auto-mode capability
- Menu system
- AIP (Advanced Intercept Point)
- Switchable AGC Circuit (SLOW/FAST)
- All-mode squelch
- CW reverse mode
- Full break-in and semi break-in
- 20dB attenuator
- Multi-function microphone supplied
- RF output power control (100W, 50W, 10W)
- Optional 500Hz CW filter (YK-107C)
- Optional external antenna tuner(AT-50)
- Optional computer interface (IF-10D)

93ARD-0807

KENWOOD COMMUNICATIONS CORPORATION
AMATEUR RADIO PRODUCTS GROUP
P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745
KENWOOD ELECTRONICS CANADA INC.
6070 Kestrel Road, Mississauga, Ontario L5T 1S8

KENWOOD

TS-50S
HF TRANSCEIVER

KENWOOD

Compact Milestone

Kenwood's TS-50S is going places. As the smallest HF transceiver in the world, it opens up a whole new world for the Amateur Radio enthusiast. It can be mounted in a vehicle, taken on a DX-pedition, or even permanently installed as a base station transceiver. Yet despite its compact dimensions, the TS-50S packs a hefty punch. Maximum output is 100W, and there's a powerful cooling fan with heat sink to

ensure stable operation. Sophisticated features include DDS with innovative "fuzzy" control, and Kenwood's own AIP. For user-friendly operation on the move, there's also a multi-function microphone, a handy menu system, and an optional antenna tuner. All this and more, for the TS-50S is equipped with dual VFOs for split-frequency operations.

100 memory channels

The TS-50S is equipped with 100 channels for independent storage of transmit and receive parameters such as frequency, mode, and filter setting. Memory shift facilitates transfer of data to the VFOs.

Easy-to-use scan functions

Convenience is further improved with the provision of a carrier-operated scan stop mode, a first for HF rigs.

Powerful menu system

First featured on the top-of-the-line TS-950SDX, Kenwood's versatile menu system is provided on the TS-50S—to select CW full or semi break-in, change repeater subtone, adjust microphone UP/DOWN step size, and perform many other operations using just a few keys. The menus are also accessible via the supplied microphone.

Dual VFOs (A and B)

Since VFO data is stored independently for each band, even after switching bands the previously used frequency will still be available.

TF-SET

TF-SET is provided so the TS-50S can be used for split operations and DX applications. This function is available when the receive frequency is locked, so the operator can avoid losing a targeted DX station.

160m to 10m Amateur band operation with 500kHz to 30MHz general coverage receiver

Despite its small size (179mm wide, 60mm high, 233mm deep), the TS-50S offers transmit/receive performance equivalent with most of the large HF transceivers on the market. Naturally, it supports LSB, USB, CW, AM and FM.

DDS (Direct Digital Synthesizer) with fuzzy control

For the first time, Kenwood has introduced "fuzzy" logic control circuitry to enable the main encoder to tune smoothly from 5Hz steps to fast forward mode.

AIP (Advanced Intercept Point)

Kenwood's AIP system—an exclusive circuit design capable of raising dynamic range to 105dB—ensures first-class receiver performance with a significantly reduced noise floor level.

Comprehensive interference reduction

- **CW reverse mode**

The pitch of interference competing with the CW signal is reversed so the operator can approach the signal from either side.

- **All-mode squelch**

The squelch circuit effectively suppresses undesirable background noise when there is no signal present.

- **Switchable AGC circuit (SLOW/FAST)**

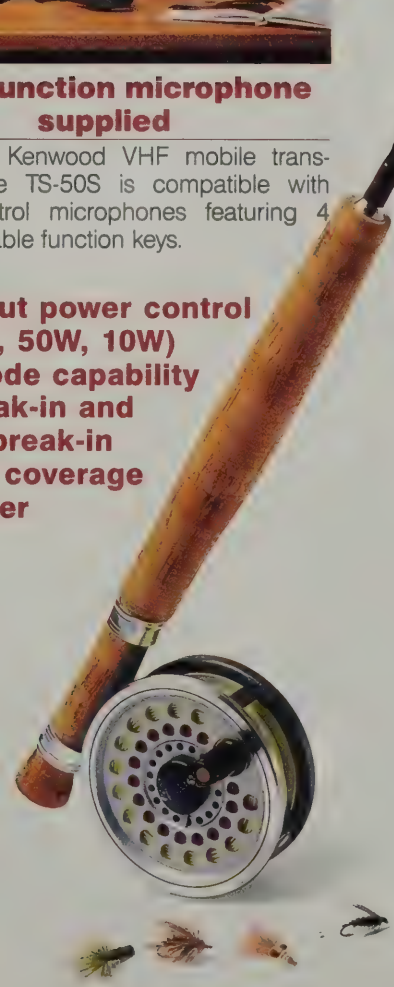
AGC (automatic gain control) can be changed via the menu system. This ensures optimum receiver operation in SSB, AM and CW modes under all signal strength conditions.

- **IF shift**
- **20dB attenuator**
- **Noise blanker (pulse)**

Multi-function microphone supplied

Like other Kenwood VHF mobile transceivers, the TS-50S is compatible with remote-control microphones featuring 4 programmable function keys.

RF output power control (100W, 50W, 10W)
Auto-mode capability
Full break-in and semi break-in
General coverage receiver



Kenwood's TH-22AT/42AT: The Compact Solution!

144 MHz/450 MHz single band HTs

More Power !

Features

- 3-watt output from MOS FET power module and supplied 6-volt battery (TH-22AT: approx. 3 watts, TH-42AT: approx. 2.5 watts), and 5-watt output with optional PB-34!
- Compact design: 2-3/16 x 4-5/8 x 1 in.
- Built-in DTMF keypad with monitor
- Built-in DTSS page system ■ Large 1-7/16" speaker
- 41 E²PROM channel memories (including 1 call channel)
- Multiple scan functions (VFO, call & memory)
- Carrier-operated & time-operated scan stop modes
- Tone alert with elapsed time indicator
- Battery-saver circuit and auto power-off function to extend battery life ■ Selectable squelch configuration
- RF output power control (Hi/Low/EL)
- Built-in CTCSS encoder, optional TSU-8 decoder (any tone can be stored in any channel)
- User-friendly menu system to customize your operating preferences ■ Easy to program and use
- Modifiable for MARS and CAP. Specifications guaranteed for Amateur bands only. Permits required for MARS and CAP use.
- Wide range of accessories to enhance operating convenience and enjoyment

Slim, compact, lightweight. These words describe the exterior of the new TH-22AT Series HTs. Rugged, innovative, sturdy. These words describe what is on the inside. Because along with the beauty, this new series of HT has all the things you want in a portable communications package. Like a streamlined, easy to program interface, one touch controls, and a simplified menu of functions that you can customize to suit your needs. Even a DTMF memory that stores five of your favorite 15 - digit telephone numbers for autopatch use. Wide band receive - 136 to 173.99 MHz. A new innovative microprocessor and final amplifier circuit enables a full five watts, while conserving battery power. (The supplied battery provides **3 watts**.) Easy mobile operation with optional PG-3H cable.

As always, a full line of accessories is available to enhance your operating enjoyment!

See your favorite Authorized Kenwood Amateur Radio Dealer for all the details!

Modifiable for MARS/CAP use. Permits required. Specifications guaranteed for Amateur band only.

93ARD-0829

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KENWOOD

Kenwood's TM-942A/742A/642A—
Triple Triumph

Good things come in threes. Like Kenwood's distinctive TM-942A (144MHz/440MHz/1200MHz), TM-742A (144MHz/440MHz), and new TM-642A (144MHz/220MHz)—high-performance FM multibanders that demonstrate the best in mobile communications technology. Besides offering triple receive and display capability, the TM-942A can even receive all three bands simultaneously. For the TM-742A and TM-642A, you can choose one of several optional band units, enabling triple band operation with the same triple simultaneous receive. Top-notch features include 101 memory channels (all available for split operation), automatic band change, DTSS with page, and S-meter squelch. There's even a wireless remote control function. Yet operation is remarkably simple, thanks to sophisticated microprocessor control, high-visibility illuminated keys, and clear status displays. You wouldn't expect any less from Kenwood. But there's more: you can mount the controls and display separately from the main unit (requires optional kit) for unique 3-way convenience.

Features

- Max. 50W output (144MHz), 25W (220MHz), 35W (440MHz), 10W (1200MHz)
- 101 memory channels & memory bank system
- Independent SQL & VOL controls for each band
- Automatic band change
- Built-in DTSS selective calling feature with page
- Selectable frequency step ■ 8 scan modes per band
- Time Operated & Carrier Operated scan stop modes
- Direct frequency entry with supplied microphone
- Tone alert with elapsed time indicator
- S-meter squelch, noise squelch & auto squelch
- Cross-band repeater ■ Muting for sub-band circuit
- Multiple lock functions ■ Wireless remote control function
- Built-in CTCSS encoder & optional TSU-7 decoder
- Date & time display, stopwatch, alarm & on/off timer
- 3-position RF output power control
- Auto power-off with warning beeper ■ Time-out timer
- Separate control & display units (optional cable kits)

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KENWOOD

94ARD-0894

Kenwood's TM-255A/455A -
Travel Light

Features

- Frequency coverage: TM-255A: 144-148MHz; TM-455A: 430-440MHz
- 101 memory channels
- 50W (TM-255A), 35W (TM-455A)
- DDS (Direct Digital Synthesizer) with fuzzy logic control
- Tone tuning dials
- Dual-menu system
- Built-in DTSS with page
- AIP (Advanced Intercept Point)
- IF-SHIFT (SSB, CW)
- Pulse noise blanker
- Memory scroll
- TF-SET
- Multi-function microphone with DTMF (supplied)
- Automatic mic gain control circuit
- Tone alert system with elapsed time indicator
- Built-in TCXO (temperature-compensated crystal oscillator)
- 9-pin mini DIN connector for 1200/9600 bps packet
- S-meter squelch
- All mode squelch
- Built-in CTCSS encoder, with optional TSU-5 decoder
- Auto power-off
- Time-out timer

TM-255A/455A
ALL-MODE TRANSCEIVERS

1200 9600 bps packet compatible

Get back. All-mode transceivers are on the move, with the launch of Kenwood's innovative new TM-255A (144MHz) and TM-455A (430MHz). Both models feature a detachable front panel—a world first in this category—for easy mounting in any vehicle. But whether mobile or stationary, you can count on peerless performance—in FM, SSB and CW modes. Because "compact" doesn't mean "compromise". Take for example the 101 memory channels-plus memory shift, memory scroll, and a full range of scan functions. Among the many other impressive features are built-in DTSS with page function, DDS with "fuzzy" control, a jack for 1200/9600bps packet communications, and comprehensive noise reduction measures—including Kenwood's exclusive AIP, IF-SHIFT and a noise blanker. Truly a powerful package, but surprisingly easy to operate, thanks to the DTMF microphone with programmable keys, dual-menu system, and twin tuning dials. All-mode versatility at its best. And Kenwood made it happen.

*An optional accessory kit is required to mount the front panel separately from the main unit.

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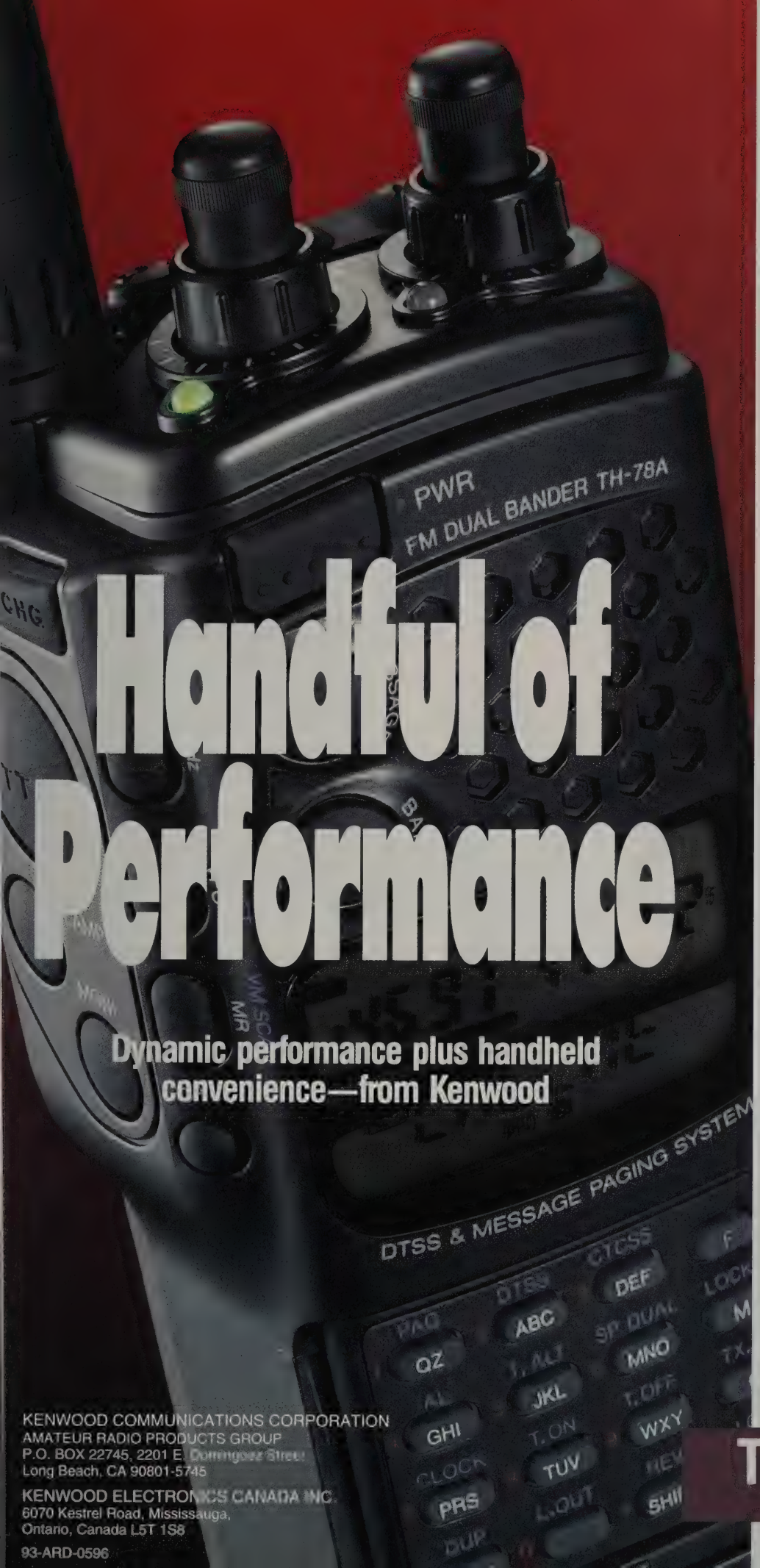
KENWOOD

94ARD-0928



Handful of Performance

Dynamic performance plus handheld convenience—from Kenwood

KENWOOD

...pacesetter in Amateur Radio

To get the most out of handheld communications, choose Kenwood's TH-78A (144MHz/440MHz) which offers all the latest features. Or the TH-28A (144MHz) and TH-48A (440MHz) single-band transceivers, which are equally impressive. All three represent a winning combination of top-flight technology and ergonomic design.

- **Alphanumeric memory**
  Alphanumeric data (max. 6 characters) can be entered directly into memory.
- **Alphanumeric message paging**
  In addition to standard DTSS and paging functions, alphanumeric messages can be stored in memory for immediate transmission.
- **Dual-frequency receive**
  In addition to full-duplex cross-band operation, the TH-78A is equipped to receive two frequencies simultaneously, even on the same band. There's also independent double-band scan and ABC (automatic band change). The TH-28A and TH-48A feature dual-band receive capability, enabling semi-duplex cross-band operations (TH-28↔TH-48A).
- **Frequency coverage**
  TH-28A: 118-173.995 MHz, sub RX: 438-449.995 MHz; TH-48A: 438-449.995 MHz, sub RX: 136-173.995 MHz; TH-78A: 118-173.995, 438-449.995 MHz. Transmit on Amateur bands only. (MARS/CAP modifiable, permits required).
- **2.5W power with supplied battery pack**
  5W with 12 VDC power source (PB-14, PB-17, or external DC).
- **Non-volatile memory**
  The TH-78A has 50 memory channels (expandable to 250 with the ME-1 option), while the TH-28A and TH-48A have 40 channels (expandable to 240 with the ME-1 option).

TH-78A/28A/48A

FM Handheld Transceivers

KENWOOD COMMUNICATIONS CORPORATION
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Long Beach, CA 90801-5745

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93-ARD-0596

KENWOOD

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Generating 50 watts of RF output, Kenwood's TM-241A Series is ideal for on-the-move communications. This single-band transceiver is a smart choice for mobile applications that demand reliable performance with optimum operating ease. Add in Kenwood's options and you're assured of first-class communications.

- **Wide band receiver coverage.** The TM-241A receives from 118-173.995 MHz. Transmit range is 144-148 MHz. (Modifiable for MARS and CAP operation, permits required.) • **TM-331A** covers 215-230 MHz • **TM-441A** covers 438-449.995 MHz, and the **TM-541A** covers 1240-1299.995 MHz.
- **CTCSS built-in, selectable from the front panel.** KQT-8 programmable decoder optional.
- **TM-241A provides 50 W, TM-331A is 25 W, TM-441A 35 W, and TM-541A 10 W.** Three power positions, 5, 10, and full. The TM-541A has two power positions, 1 and 10 watts.
- **RC-20 Remote control option.** The RC-20 gives you the needed flexibility for those tough installations. As supplied, one RC-20 will control two transceivers. All front panel functions are controllable from the RC-20. The RC-20 and IF-20 combine to allow control of up to four radios.
- **20 full-function memory** channels store frequency, repeater offset, sub-tone frequencies, and repeater reverse information. **Repeater offset on 2m is automatically selected.** There are **four channels** for "odd split" operation.
- **Selective calling and pager option.**
- **Digital recording system option.**
- **Multiple scanning functions.** Band and memory scan, with selectable scan stops and memory channel lock-out.
- **Large LCD display with four-step dimmer control.**
- **Supplied accessories.** Mounting bracket, DC cable, fuses, multi-function DTMF mic.

Optional accessories:
• **RC-10** Handset remote controller • **PG-4G** Extra control cable • **RC-20** Full-function remote control head • **IF-20** Interface unit, used with the RC-20, allows 2 to 4 radios to be remotely controlled • **KQT-8** Programmable CTCSS decoder • **PG-2N** Extra DC cable • **PG-3B** DC line noise filter • **MA-700** 2m/70cm dual band antenna with duplexer (mount not supplied) • **MB-201** Extra mounting bracket.

TM-241A/331A/441A/541A

FM Mobile Transceivers

(Specifications guaranteed for Amateur band use only.)

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93ARD-0634

Kenwood's TM-251A/451A/551A

Shift into Overdrive!

TM-251A/451A/551A

FM MOBILE TRANSCEIVERS

1200 9600 bps packet compatible

When the going gets rough, Kenwood's mobile FM transceivers show their stuff. For a winning combination of performance and operating ease, nothing beats the TM-251A (144MHz), TM-451A (440MHz), and TM-551A (1200MHz). Despite being single-banders, they have a dual-band receive capability, allowing full-duplex cross-band communications using split-memory channels (TM-251A↔TM-451A). Each transceiver is equipped with 41 memory channels (expandable to 200 with the ME-1 option), a digital recording system for messages (max. 16 secs), a dual-menu system, and a 6-pin mini DIN connector for 1200/9600bps packet communications. Built-in DTSS allows 3-digit DTMF selective calling access, and the page function alerts you to incoming calls. There's also a large multi-function LCD with 3 different display modes, as well as a multi-function microphone with 4 programmable keys and 16 DTMF keys. So if you want pole position, choose Kenwood.

TM-451A

Available soon!

TM-551A*

*This device has not been approved by the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.

Features

- Max. 50W output (TM-251A), 35W (TM-451A), 10W (TM-551A)
- 41 memory channels (up to 200 with ME-1 option)
- Dual-menu system ■ DTSS with page ■ S-meter squelch
- Built-in digital recording system
- 6-pin mini DIN connector (1200/9600bps packet)
- Multi-function microphone with DTMF (supplied)
- Fuzzy logic control for tuning
- Selectable frequency step (5, 10, 12.5, 15, 20 or 25kHz)
- Channel number display ■ Auto-lock tuning (TM-551A)
- Band scan, program scan, memory scan, call scan
- Time Operated and Carrier Operated scan stop modes
- Cross-band repeater functions
  - *TM-251A — TX: 144MHz band, RX: 440MHz band*
  - *TM-451A — TX: 440MHz band, RX: 144MHz band*
- Auto repeater offset (TM-251A)
- 10 DTMF memory (15 digits)
- Built-in CTCSS encoder and optional TSU-8 decoder
- 5-step dimmer control
- 3-position RF output power control (TM-251A: 50W, 10W, 5W; TM-451A: 35W, 10W, 5W)
- Auto power-off (OFF, 60, 120, 180 min.) ■ Time-out timer (OFF, 3, 5, 10, 20, 30 min.) ■ Wireless close function

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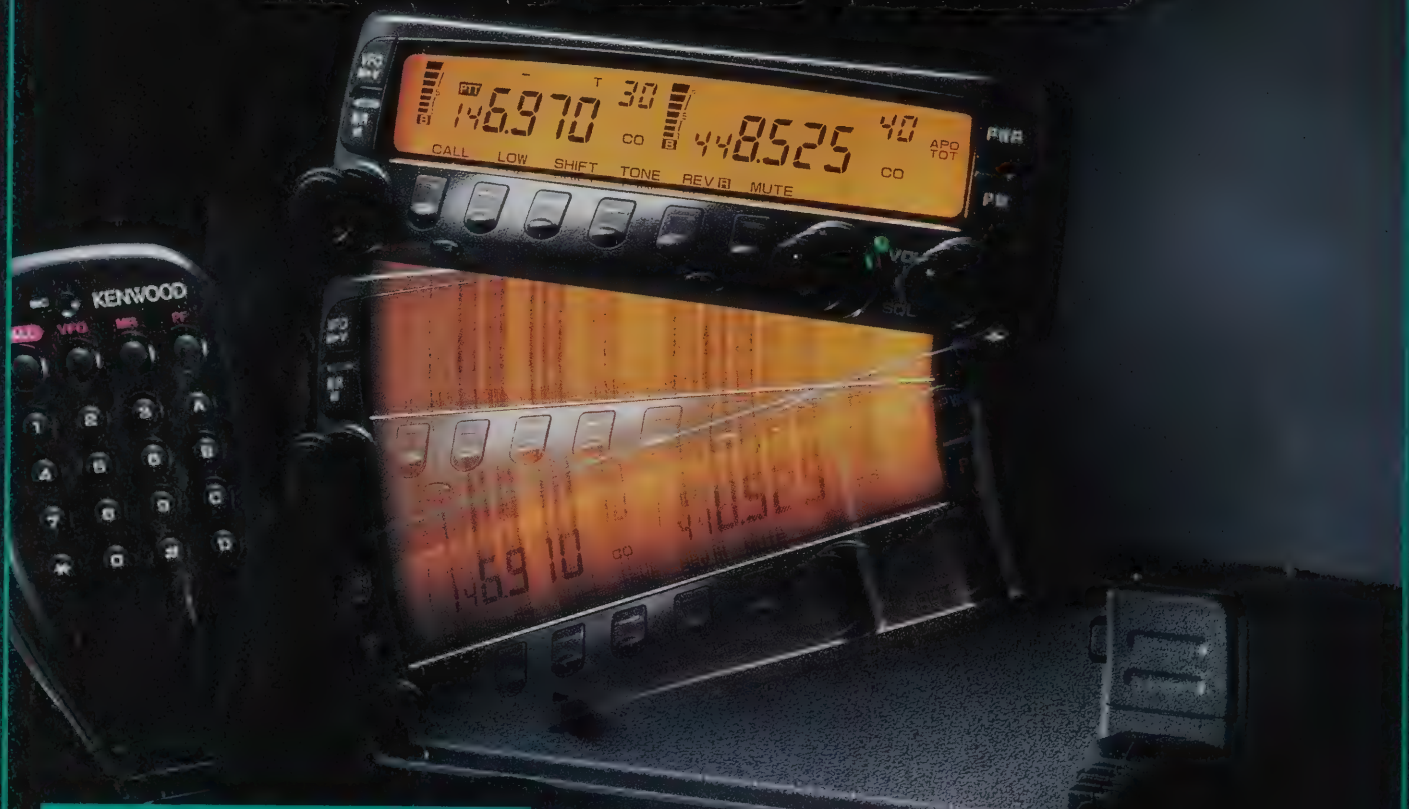
KENWOOD

94ARD-0895

Kenwood's TM-733A -

Faster and Faster!



Features

- Max. 50W output (144MHz), 35W (440MHz)
- "6-in-1" programmable memory
- 72 memory channels
- Time-Operated & Carrier-Operated scan stop modes
- Dual receive on same band (VHF+VHF or UHF+UHF)
- Built-in DTSS selective calling with page
- ASC (Auto Simplex Checker)
- Built-in CTCSS encoder & optional TSU-8 decoder
- Key function display ■ Automatic band change
- AIP (Advanced Intercept Point) ■ Cross-band repeater
- Selectable frequency step (5, 10, 12.5, 15, 20 or 25kHz)
- Wireless clone function ■ Incremental MHz key
- S-meter squelch
- Tone alert system with elapsed time indicator
- Separate speaker terminals for each band (switchable)
- Auto repeater offset (144MHz)
- Repeater reverse switch & offset switch
- 3-position RF output power control
- Dimmer control ■ Auto power-off

*An optional accessory kit is required to mount the front panel separately from the main unit.

TM-733A

FM DUAL BANDER

1200 9600 bps packet compatible

Theft Deterrent

Kenwood's new FM dual bander, the TM-733A (144MHz/440MHz), is specially tailored for hassle-free mobile communications with a unique "6-in-1" programmable memory. Six entire operating profiles—including everything from frequency range to dimmer level—can be stored, ready for instant recall. So there's virtually no need to adjust your settings. The detachable front panel has a high-visibility LCD with key function display to make on-the-move operation even easier. Of course, this compact transceiver has a full complement of sophisticated features, including 72 memory channels, DTSS selective calling and page functions, ASC (checks whether you can switch from a repeater to simplex communications), AIP (Kenwood's exclusive circuit for enhancing RX performance), and a jack for 1200/9600bps packet use. And as well as receiving simultaneously on VHF and UHF bands, the TM-733A can receive two frequencies on the same band (VHF+VHF or UHF+UHF). There's even an optional quick-release kit as an added anti-theft measure. So check out the TM-733A-a sensation bred from inspiration.

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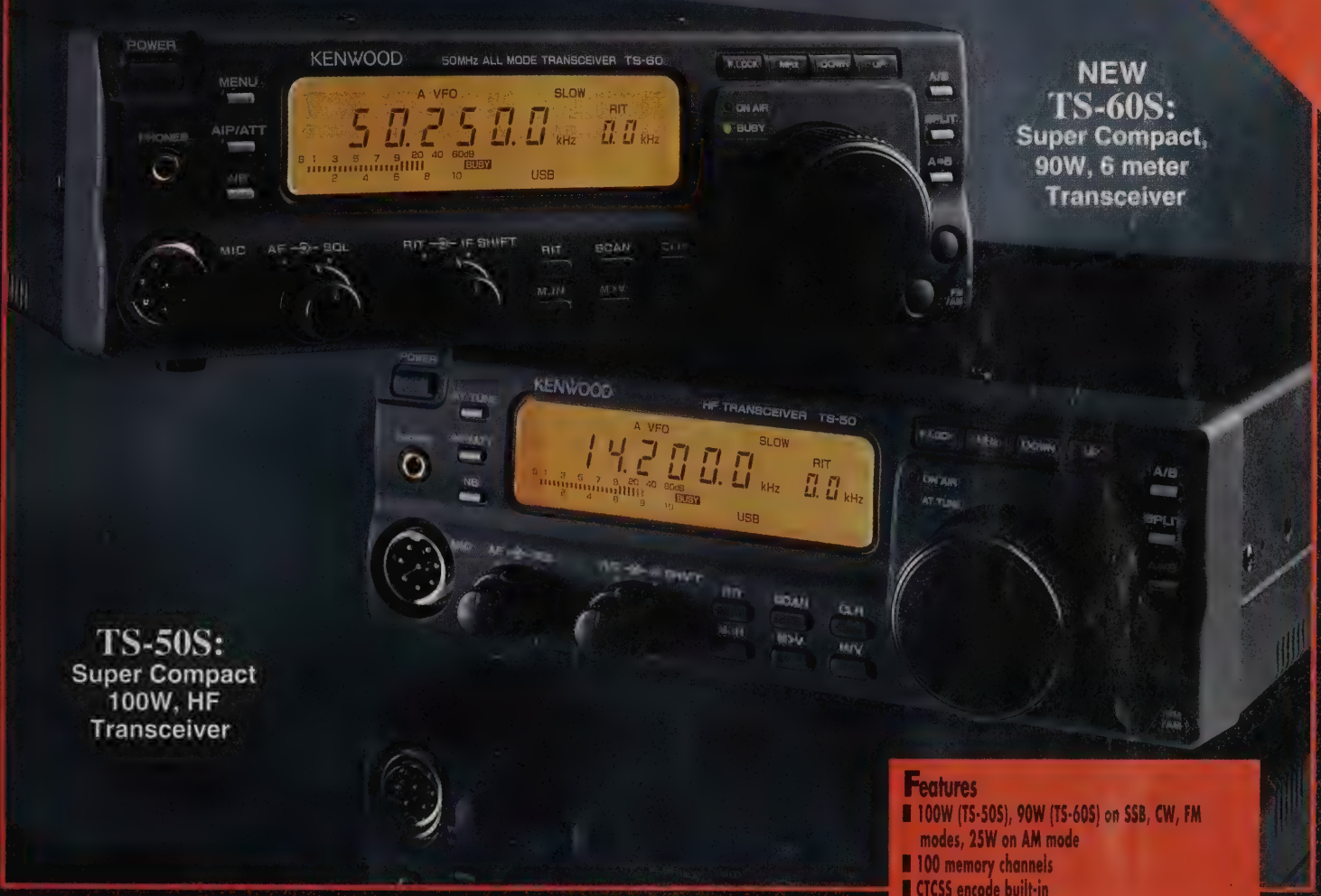
KENWOOD

94ARD-0929

You Asked for It, And Kenwood Delivers !

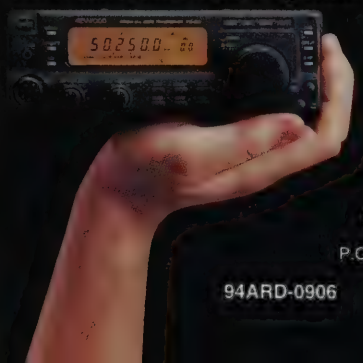
Very popular with NO CODE TECHNICIANS !



NEW TS-60S:
Super Compact, 90W, 6 meter Transceiver

TS-50S:
Super Compact 100W, HF Transceiver

Meet the new set of twins from Kenwood -- The TS-60S all mode, 6 meter, 90W transceiver, and the TS-50S all band, 100W HF transceiver with general coverage receiver. Due to the amazing response to our super compact TS-50S transceiver, we have come up with a companion 6 meter transceiver in the same package, the TS-60S. Compact enough to mount in a vehicle or take into the field, both models provide desktop power and such sophisticated features as 100 memory channels, microprocessor controlled Direct Digital Synthesis (DDS) with innovative "fuzzy logic" control, and Kenwood's own AIP for superior dynamic range. There's also IF shift and CW reverse mode for interference reduction, TF-SET, and a noise blanker - plus everything you need for split - frequency operations. The menu function enables you to customize and select operating features to suit your individual needs.



TS-50S and TS-60S -- the new set of twins from Kenwood. Innovative, rugged, super compact - choose one for your shack, mobile, or portable operations today!

Features

- 100W (TS-50S), 90W (TS-60S) on SSB, CW, FM modes, 25W on AM mode
- 100 memory channels
- CTCSS encode built-in
- DDS(Direct Digital Synthesizer) with fuzzy logic control
- Large LCD panel with digital bar meter
- Auto-mode capability
- Menu system selects custom operating features
- AIP (Advanced Intercept Point) for increased receiver dynamic range
- Switchable AGC Circuit (SLOW/FAST)
- All-mode squelch
- CW reverse mode
- Full break-in and semi break-in
- 20dB attenuator
- Relay & ext. ALC terminals
- Multi-function microphone supplied
- Auto power off function
- 3-position RF output power control
- Optional 500Hz CW filter (YK-107C)
- Optional AT-50 external antenna tuner (TS-50S only)
- Optional computer interface (IF-10D)

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KENWOOD

94ARD-0906

PEAK PERFORMANCE

Kenwood—the hallmark of quality in HF communications

TS-450S HF Transceiver

Kenwood's TS-450S displays a wealth of engineering expertise derived from years of experience with transceiver technology. Covering all nine amateur bands—in SSB, CW, AM, FM and FSK modes—with powerful 100W output (40W for AM), the TS-450 can star in virtually any role. Its compact, lightweight construction and rugged reliability make it especially suited for "DX-peditions." Advanced features include Kenwood's Advanced Intercept Point (AIP) system for improved dynamic range, a Direct Digital Synthesizer for fine (1Hz) tuning, automatic antenna tuner (built-in or optional), and the optional DSP-100 digital signal processor.

TS-850S HF Transceiver

Tried and true, Kenwood's TS-850S is the perfect choice for the experienced HF operator who wants uncompromising performance plus user-friendly convenience. Among the impressive credentials of this top-flight HF transceiver are a Direct Digital Synthesizer and a digital PLL system to permit ultra-fine (1Hz) tuning, and 100 memory channels with 3 scan modes. Options include the DSP-100 digital signal processor and a preprogrammed automatic antenna tuner.

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- Service after the Sale – *that's important!*

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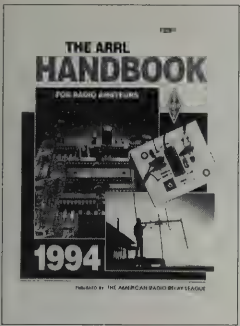
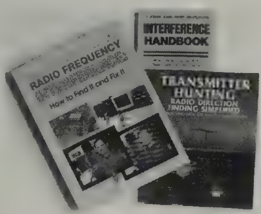


ARRL BOOKS



1994 HANDBOOK • 71st Edition! A guide to radio theory that every ham should know, including the latest digital modes and hundreds of explanatory and practical circuits. A goldmine of construction projects that will allow all hams–beginners, old-timers and everyone in between to build amateur gear for their stations. A reference guide with updated lists of parts and equipment suppliers and other data on solid-state components and transmitting tubes .... **ARR 100 $25⁰⁰**

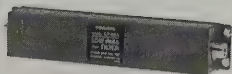
Radio Interference: How to find it and Fix It • A new approach to an Old Amateur Radio problem. Written by RFI experts, it's filled with proven ways to solve common–and not so common RFI or EMI problems, whatever their cause. In addition you'll learn how to build a co-operative environment with your neighbors and how to contact skilled volunteers who can assist you with those tricky situations.. **ARR 260 $15⁰⁰**

INTERFERENCE HANDBOOK • Locate and resolve all types of interference problems. Describes interference sources and the methods used to locate them. Discusses suppression circuits for interfering devices and protection techniques for home entertainment equipment .... **RAC 087093 $11⁹⁵**

TRANSMITTER HUNTING: Radio Direction Finding Simplified All the information you need about equipment and techniques for HF and VHF radio direction finding. Transmitter hunting is both practical and fun. Using the information in this book you can also locate jammers and other sources of radio signals and malicious interference .... **ARR 320 $19⁰⁰**

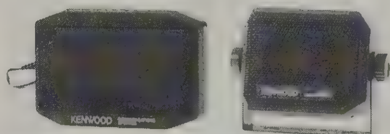
More ARRL Books – See the Price List

KENWOOD HS-5 Headphones
Specifically designed for use with communications systems. Provides natural sound and eliminates uncomfortable pressure feeling permitting long hours of fatigue-free listening. 200mW maximum. input, 8Ω, 150Hz to 4kHz response. The 78" cord has a standard 1/4" phone plug attached. 12 oz...... **$79⁹⁵**



KENWOOD PC-1A Phone Patch Controller • Interfaces transceiver and telephone line, isolates receiver and transmitter. 8-pin plug for to KENWOOD transceivers, but may be used with most other equipment with changes in connections. Features NULL control, receiver/transmitter gain controls and VU level meter. 5¾"w x 2¼"h x 5"d, 1¾ lbs.............................. **$124⁹⁵**

KENWOOD LF-30A HF Low Pass Filter • Reduces the possibility of causing TVI and BCI by suppressing harmonics contained in RF signals from transmitters operating in the 1.9 to 28MHz range. The cutoff frequency is 30MHz and attenuation is greater than 90dB from 90-300MHz. Rated 1KW PEP (SSB), 52Ω input/output. 9½" x 2" x 1⁵⁄₁₆ ", 1.2 lbs.................. **$57⁹⁵**



KENWOOD SP- 41 Compact Mobile Speaker (right) • Contains a 2¼" speaker. 5W, 4Ω, 600Hz–4kHz. 75" cord with 3.5mm plug, mounting bracket included. 3⅞"w x 3"h x 2⅛"d, ½ lb ... **$46⁹⁵**

KENWOOD SP-50B Quality Mobile Speaker • Contains a 3" speaker. 2.5W, 8 Ω, 300Hz–4kHz. 102" cord with 3.5mm plug, mounting bracket included. 5"w x 3³⁄₃₂"h x 1⁷⁄₁₆"d, 0.6 lb **$49⁹⁵**

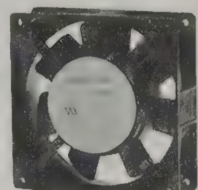
AIM Electronics

AIM 38-384 Light Duty DC Power Supply • Input: 115V AC, Output: 13.8V DC regulated. Rated at 4 amps with 5 amp surge. On/off switch, binding posts on front panel, LED "*on*" indicator, fuse protection. 7¾" x 4¾" x 3", 5½ lbs **$39⁹⁵**

AIM 38-305 AC Adapter
Multi-voltage, rated at 500MA. Cord has multiple application plugs and 9V snaps. Converts 117 VAC to low voltage DC to operate battery powered equipment requiring 3, 4.5, 6, 7.5, 9 or 12 volts DC **$12⁹⁵**

AIM 38-312 Regulated AC Adapter
Multi-voltage, rated at 1200MA. Cord has multiple application plugs and 9V snaps Converts 117 VAC to low voltage DC to operate battery powered equipment requiring 1.5, 3, 4.5, 6, 7.5, 9 or 12 volts DC.............. **$24⁹⁵**

AIM Cooling Fans



Model 48-1921TP • 120V AC @ 0.10A, 10W. 2700 RPM, 36 CFM. 3.62" x 3.62" x 0.984"d..... **$19⁹⁵**

Model 48-1923TP • 120V AC @ 0.07A, 6W. 1700 RPM, 21 CFM. 3.62" x 3.62" x 0.984"d...... **$19⁹⁵**

AIM Coax Strippers
For quick, clean preparation of coaxial cable without damage for installation of connectors. No guessing! Adjustable blades, two cuts in one motion.
Model 24-7735P • for RG-58, RG-59, RG-62 ....**$19⁹⁵**
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Model 24-7739P • for RG-8, RG-11, RG-213 ....**29⁹⁵**

AIM Crimp Tools
Model 24-9960P • All-in-one tool! Crimps two and three piece connectors: 068 center conductor, 16-22 AWG;.110 center conductor, 10-13 AWG; .213 hex crimp RG-55, 58, 141, 142, 223, 303, 400, RG-59 TFE; .255 hex crimp RG-59, 62, 140, 210, Belden 8279; .324 hex crimp RG-6, 143, 212, 222 Belden 8281, 9231, 9141. .... **CLOSEOUT $39⁹⁵**

Model 24-8789P • For RG-58, RG-59, RG-62, crimps two and three piece BNC and TNC connectors with standard crimp rings by AMP, Amphenol, Kings....... **CLOSEOUT $24⁹⁵**

24-9912P • For RG-122, 180, 34M; RG-195, 8218; RG-174, 188, 316; RG-179, 187. Crimps 3 piece BNC/TNC . **CLOSEOUT $24⁹⁵**

AIM Precision Knife Set

Model 24-7474P • Quality knives and blades for: hobbies, crafts, models, arts, woodcarving, etc. Three different knives for use on light to heavy materials. Ten replaceable blades, convenient case..... **CLOSEOUT $9⁹⁵**

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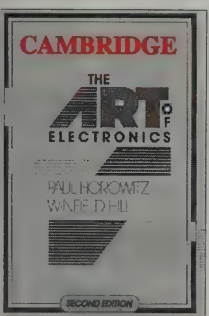

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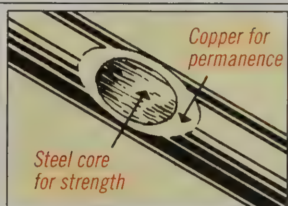
COMET Power Pocket
Portable or extra power for Emergencies, Hamfests, Hiking, etc. Soft bag with belt loop plus shoulder strap/waist belt houses a 12V/2.0AH rechargeable battery. Simply plug your radio into the female adapter socket for hours of extra talk time. Lightweight, compact - 3½"w x 1"d x 6½"h, 30 oz. Recharges in 6-8 hours, charger included ...**$69⁹⁵**



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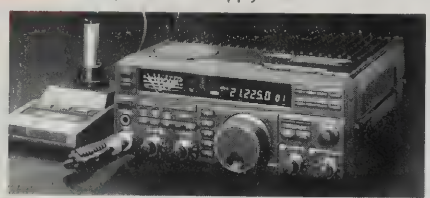
YAESU FT-1000 • 200W - 9-band, all-mode transceiver with 100kHz-30MHz receive, 99 memories and built-in antenna tuner with 39 memory presets. Knob or direct keyboard entry. Simultaneous dual receive with two tuning knobs, balance and dual displays; optional crossband dual receive module. Digital Voice Storage option for playback of 16-second receive memory plus two 8-second "CQ Contest" messages on transmit. Antenna selector, electronic keyer, independent filter selection. Cascaded filter selections, width control, IF shift, IF notch, squelch, noise blanker, CW audio peak filter. Built-in AC supply. 6"h x 16"w x 15"d, 58 lbs.

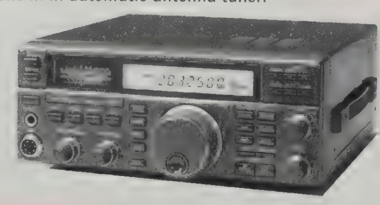
YAESU FT-1000D • Deluxe version–dual bandpass filter for crossband receive, temp. compensated crystal oscillator, 2.4kHz/2KHz SSB filters and 500Hz CW crystal filter.

YAESU FT-990 • 100W–all mode 160-10M transceiver with 100kHz-30MHz receiver. 99 tunable/scannable memories and built-in antenna tuner with 39 memory presets. Dual VFOs, digital IF shift and notch, speech processor. Special provisions for CW, RTTY and Packet. Digital Voice Contest option. Built-in AC supply. 12¾"w x 4½"h x 11½"d, 30 lbs.

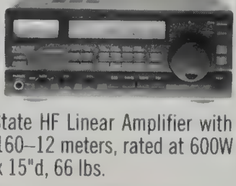
FT-990DC • Same, but NO AC supply or CW filter.



YAESU FT-890 • 100W 160-10M all mode transceiver with 100kHz-30MHz receiver. Two independent A/B VFOs for each band (20 total) hold frequencies and modes, clarifier offsets and repeater shifts. 32 memories store data for both VFOs, giving a total of 84 independent sets of frequency, mode and other selections that can be tuned and scanned. Noise blanker, all-mode squelch, AF speech processor, built-in iambic keyer. Provisions for internal automatic antenna tuner. 13.5VDC @ 20A. 9⁵⁄₁₆"w x 3⅝" x 9½"d, 12.3 lbs. **FT-890/AT** has built-in in automatic antenna tuner.



YAESU FT-840 • 100W 160-10M all-mode transceiver with 100kHz–30MHz receive. Two independent A/B VFO's for each band hold frequencies and mode. 100 memories with independent transmit and receive per memory, built-in CTCSS encode, IF shift and direct digital synthesis receiver. Two opt. antenna tuners. 13VDC @ 20A. 4"h x 9½"w x 10"d, 10 lbs.



YAESU FL-7000 left) • Solid-State HF Linear Amplifier with built-in antenna tuner. Covers 160–12 meters, rated at 600W out with 70W drive. 5"h x 15"w x 15"d, 66 lbs.

More FL-7000 info on RF Power Amplifier Page

YAESU FRG-100B (left) • Newest high performance, all mode communications receiver with 50kHz–30MHz coverage. 12V DC. 9¼"w x 3½"h x 9½"d, 6½" lbs.

More FRG-100B info on Shortwave Page

YAESU FT-650 • 100W – 6, 10 and 12M all mode transceiver with 24.5 to 56.0 MHz receiver. 105 memories: 99 for channels, 4 programmable scan memories and 2 priority channels. 1.2db NF receive preamplifier with switched 5 MHz bandwidth varactor tuned BPF, Direct Digital Synthesis and automatic seeking notch filter. Built-in AC supply or direct 12V DC.@ 18A operation. 5¼"h x 11⅛"w x 11¼ "d, 18 lbs.

YAESU FT-736R • All-mode, 2M/430 multi-band VHF/UHF transceiver. Optional band modules for 50MHz, 220MHz, and 1.2GHz. 10W out on 50MHz and 1.2GHz, 25W on the others. 14 VFO modes, 100 multi-function memories, 10 full-duplex memories. Satellite function, independent or synchronous operation of VFOs. Speech processor, iambic CW keyer, QSK or semi-full break-in CW. IF shift tuning, CW carrier shift, audio peak filter. All-mode squelch, noise blanker, illuminated multi-function meter. AFSK input for packet, CAT System bus for PC control. Built-in AC supply, or 12V DC with optional power cord. 5⅛"h x 14½"w x 11½"d, 19.8 lbs.

YAESU FT-2200 • 2m FM transceiver. 50W with 53 memory channels (Odd splits in any memory). 144-148MHz transmit; 110-180MHz receive, including aircraft. Built-in DTMF paging, coded squelch, user-selectable tuning steps, CTCSS encode and back-lit microphone are included. 50/25/5W 12VDC @ 10A. 1⅝"h x 5½"w x 6½"d, 2¾ lbs. **FT-7200** covers 440MHz.

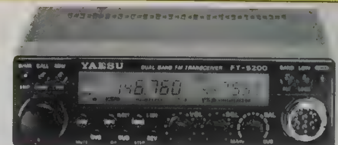
NEW! **YAESU FT-2500M (pictured – p.74)** • MIL-STD rated for shock/vibration. New front panel design, rubber coated knobs and large amber display. Large heat sink and one piece die-cast chassis. Exclusive track tuning feature reduces intermodulation and front-end overload. 31 memories, alphanumeric display. Covers 144–148MHz transmit, 140–174MHz receive, 50/25/5W output. Automatic power off, programmable timeout-timer, manual or auto back-lit display adjustment and back-lit keypad microphone. 6"w x 1⅞ "h x 7" d, 2½ lbs.

FT-912RH (left) • 10w, 1.2GHz FM transceiver. Large multi-function LCD display. User-selectable tuning steps with main tuning knob and up/down frequency entry with supplied DTMF microphone. Digital VFO, 20 full-function memories with scanning and lockout, encoder/decoder standard. Programmable band scan and offset, priority and call channels. CAT System for computer control. 12V DC @ 4A. 1⅝"h x 5½"w x 6"d, 2.8 lbs.

Portable VHF/UHF FM/SSB/CW transceivers (right)

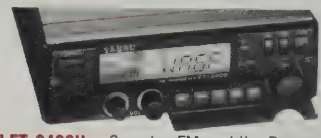
Three models, same appearance and function. 2.5W out when operating from 12V DC @ 1.1A, or with optional snap-on battery case containing 9 (C) cells or nicads. DTMF microphone with up-down control, dual VFOs, 10 multi-function memories with scanning, programmable band scan. Offset tuning for satellites, LCD display. 2⅛"h 6¼"w x 7½"d, 2.6 lbs.

FT-290R MkII • 2m, 25W **FT-690R MkII** • 6m, 10W
FT-790R MkII • 430-450MHz, 25W



YAESU FT-5200 • 2m/440MHz remotable FM Mobile. Cove 144-148MHz transmit with 140-174 receive and 43 450MHz. 32 tunable memories, 38-tone programmab CTCSS encode. Output: (2m) 50/5W, (440) 35/5W. Cros band full duplex. Built-in duplexer, back lit DTMF micr phone, detachable front panel. **Optional:** Digital voice mem ory, DTMF paging unit, CTCSS dual decoder, wireless micr phone/remote controller, external speaker and remote sepa ration kit. 5½"w x 1⅝"h x 6"d, 2 lb

FT-5100 • Like 5200 without remote capability, has 9 memories and DTMF paging, coded squelch and back-l DTMF mic. **FT-6200** • Covers 440MHz/1.2GHz, 35w/10w



YAESU FT-2400H • 2-meter FM mobile. Rugged, built to tak off-road abuse. Three power levels: 50W high, 25W mid an 5W low. Wide band receive 140-174MHz (140-150MHz tx). 3 full function memories,CTCSS encoder.5 scan function Band; Memory; Memory channel lockout with selectabl stops; Priority. Programmable call channel, auto. repeate offset. backlit DTMF mic. 6"w x 1⅞"h x 7"d, 1½ lbs.

YAESU FT-7400H • Same features as FT-2400, but UHF i 35W and 430-450MHz coverage.

A B C D E

YAESU FT-411E (C) • 2m FM Handheld. 144-148MHz tx, 140 174MHz (rx). 2½w LCD readout, keypad and rotary-dial fre quency. Dual VFOs, 49 memories, scanning. DTMF autodiale with 10 memories. Encoder/decoder, battery saver, automati power off 5½"h 2¼"w x 1½"d, .85 lb.

YAESU FT-811 (A) • 2w, 430-450MHz
YAESU FT-911 (A) • 1w, 1.2GHz

YAESU FT-470 (B) • 2m/440MHz, 2.3w, FM handheld. Simila to FT-411/811above. Simultaneous receive, both bands, 2 memories/band. 6½"h x 2¼"w x 1½"d, .88 lbs.

YAESU FT-416 (D) • Compact 2m FM HT. 144-148MHz t and 130-174MHz rx. 2W out. Dual VFOs, 41 tunable memo ries. DTMF paging and coded squelch, autodialer, CTCS encode/decode, VOX. 2⅛"w x 5¾"h x 1⅜"d, 12½ oz.

YAESU FT-816 • Similar to FT-416 but 70cm–430-450MH receive and transmit, 2W output.

YAESU FT-26/25 • 2-meters, 2W, 130-174MHz receive and 144-148MHz transmit. Like FT-415 without TTP.
YAESU FT-26/27 • 2-meters, 5W, 130-174MHz receive and 144-148MHz transmit. Like FT-415 without TTP
YAESU FT-76/25 • 70cm, 2W, 430/450 MHz/tx-rx.

YAESU FT-11R (E) • World's smallest handheld with a full-sized keypad. Covers 144-148MHz transmit an 110–180MHz receive including AM aircraft. 150 memories alpha-numeric display, DTMF autodialer,transmit an receive battery savers. CTCSS encode included, decode optional. 4 power levels. 4⅞"h 2¼"w x 1⅜"d, 1 lb.

FT-41R • same as FT-11R but as above but 440MHz

YAESU FT-530 (D) • 2.5W Dual-Band 2m/70cm. 140–15 and 430–450MHz tx, 130–`174 and 430–450MHz rx. Dual in-band receive, 41 memories per band, DTMF paging and coded squelch, clock with timers, battery saver, backlit keypad, cross-band repeat function, two VFOs per band; VFO and direct keypad entry. Automatically adjusts output level according to received signal strength. 5¾" x 2⅛" d 1¾" 0.9 lb.

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NEW!

FT-11R/41R
2m/70cm Handhelds

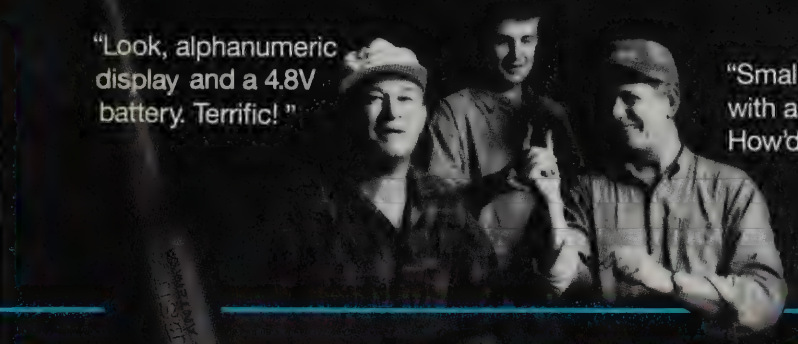
- **Frequency Coverage:**
  Wide Receiver Coverage:
  FT-11: 110-180 MHz RX,
  144-148 MHz TX
  FT-41: 430-450 MHz RX/TX
- Selectable Alpha Numeric Display
- New Compact Battery Design
  4.8V produces 1.5 Watts
  9.6V produces Full 5 Watts*
- 150 Memory Channels
  (75 when Alpha Numeric)
- AM "Aircraft" Receive
  (110-136 MHz)
- Small Compact Size w/ Easy Operation (measures only 4"H x 2¼"W x 1"D)
- Rx/Tx Battery Savers
- High-efficiency MOS FET Power Module
- Large Back-Lit Keypad and Display
- Up/Down Volume/Squelch Controls
- Built-in DTMF Paging/Coded Squelch
- Automatic Power Off (APO)
- **Accessories:**
  FNB-31 4.8V, 600 mAh Battery
  FNB-33 4.8V, 1200 mAh Battery
  FNB-38 9.6V, 600 mAh Battery
  FBA-14 6 AA Size Battery Case
  FTS-26 CTCSS Decode Unit
  NC-50 Dual Slot 1-Hour Desk Charger
  CA-10 Charge Adapter (required w/ NC-50)

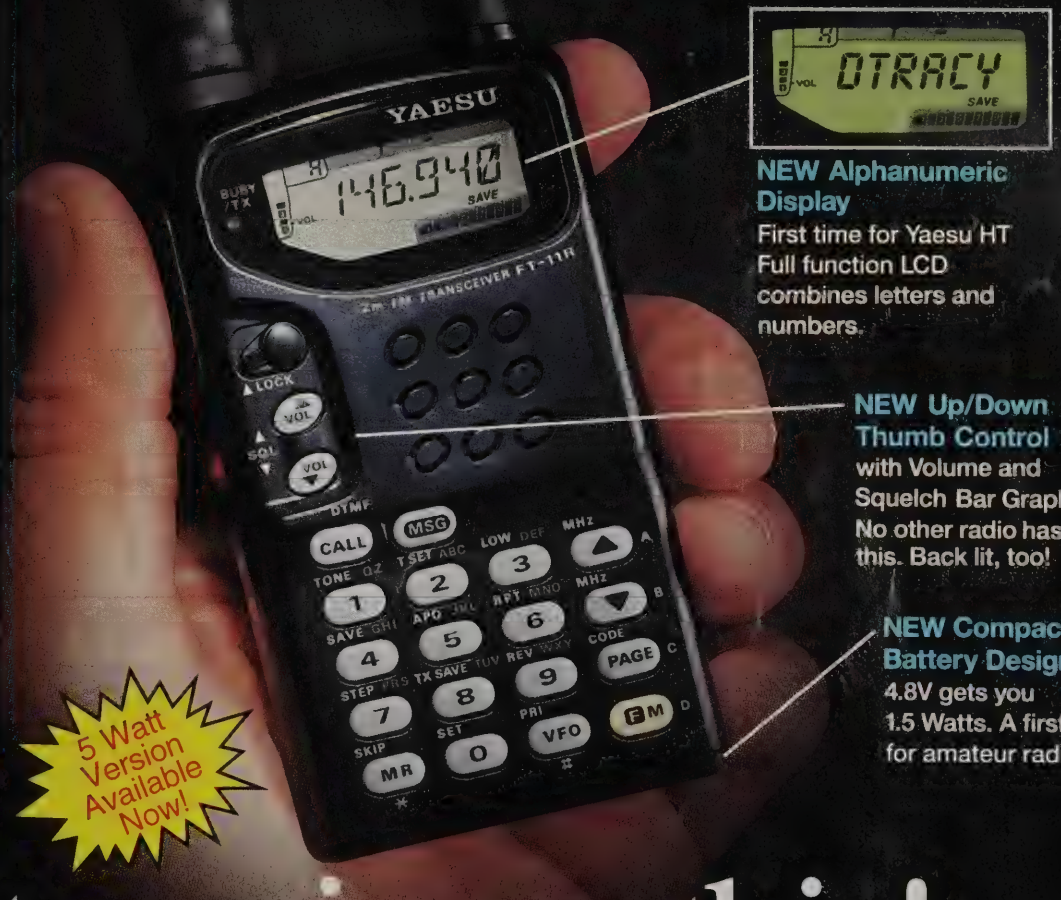
*FT-11 Only.
FT-41, 3.5 Watts

"Look, alphanumeric display and a 4.8V battery. Terrific!"

"Small and thin – with a full sized keypad! How'd they do that?"

"Yaesu did it again!"





NEW Alphanumeric Display
First time for Yaesu HT Full function LCD combines letters and numbers.

NEW Up/Down Thumb Control with Volume and Squelch Bar Graph. No other radio has this. Back lit, too!

NEW Compact Battery Design
4.8V gets you 1.5 Watts. A first for amateur radio.

5 Watt Version Available Now!

Get a grip on this!

World's smallest size HT with a full sized keypad
Measures only: 4"H x 2¼"W x 1"D

"Small" is relative, isn't it? It could mean size – which in this case it does. And, it could mean "reduced", which it doesn't! Nothing missing from the hot new FT-11R HT from Yaesu except bulk! You're going to wonder just how all the features of this full-function radio fit in. Until you remember Yaesu pioneered 2-way radio micro technology.

To see what this really means to you, check out all the new features. Like the alphanumeric display. This Yaesu HT first, lets you tag your favorite frequency by name, call sign or number. Or, the new "voltage stingy" battery. It's an industry first for amateur radio. Smaller and compact, the 4.8V battery gives you 1.5 watts on TX. And, if that's not enough, there's an optional drop in, dash mount battery charger.

You see it's not a small time performer. Just small sized. The FT-11R. Another small example of Yaesu superiority. See your dealer today!

YAESU

Performance without compromise.℠

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FT-2500M/FT-7400H 2m/70cm Mobiles

NEW

Specifications

- **Frequency Coverage:**
  FT-2500M
  RX: 140-174 MHz
  TX: 144-148 MHz
  FT-7400H
  RX/TX: 430-450 MHz
- Rugged Military Spec Design
- Advanced Track Tuning (ATT)
- Selectable Alpha-Numeric Display
- Largest Display Available
- Power Output:
  FT-2500M 50/25/5 Watts
  FT-7400H 35/20/5 Watts
- Flip Up Front Control Panel Hides Seldom Used Buttons
- Backlit DTMF Mic
- 31 Memory Channels
- CTCSS Encode Built-in
- Automatic Power Off (APO)*
- Time-Out Timer (TOT)*
- Manual* or Automatic Backlighting Adjustment
- **Accessories:**

FTS-17A	CTCSS Decode Unit
FRC-6	DTMF Paging Unit
SP-4	External Speaker
FP-800	Power Supply

*FT-2500M

"No other mobile has a Military spec rating. This radio can really take it!"

"New Omni-Glow display and backlit DTMF Mic, too. Both Yaesu 'firsts'!"

"3-stage advanced track tuning really reduces intermod. Its great!"

"Yaesu did it again."

US MILITARY APPROVED MIL-SPEC 810

Performance beyond the call of duty.

Just when you thought you had the most formidable mobile built, we made the FT-2500M – the next evolution of powerful, rugged mobile radios.

The FT-2500M takes the durable quality, features, and performance of the popular FT-2400H and goes one better! A new easy-to-operate front panel design with rubber coated knobs, new, large state of the art Omni-Glow display to provide enhanced viewing at all angles and light levels, and Yaesu's exclusive 3-Stage Advance Track Tuning feature that reduces intermodulation and front-end overload puts the FT-2500M as close as you can get to commercial grade performance in amateur frequencies.

The FT-2500M is the only mobile with a Military spec rating and the most often used controls on the front and those you "set and forget" neatly hidden. It's the first mobile radio with a backlit DTMF mic, too. With its extra large heat sink and one-piece die-cast chassis, the tough FT-2500M is unlike any other mobile in its class.

Test the mettle of your mobile. If it doesn't measure up to the endurance standards of the U.S. Military, get the FT-2500M. For flawless performance in rough and rugged situations, the FT-2500M is really formidable – just what you'd expect from Yaesu. See it at your dealer today!

YAESU

Performance without compromise.℠

FT-2200/7200

Just 5.5"W x 1.6"H x 6.5"D, the FT-2200/7200 radios are designed to fit into today's more compact cars with ease.

SPECIFICATIONS • Frequency Coverage: FT-2200 RX: 110-180 MHz, TX: 144-148 MHz. FT-7200 RX/TX: 430-450 MHz. • Wide Receiver Coverage: 110-180 MHz • AM "Aircraft" Receive: 110-139 MHz • Built-in DTMF Paging/Coded Squelch • Selectable Channel Only Display • 10 Memory DTMF Auto Dialer • Backlit DTMF Mic • Power Output 50/25/5 Watts (FT-7200 35 Watts) • 50 Memory Channels • Remote Operation w/ Optional MW-2 • CTCSS Encode Built-in • Optional Digital Voice Storage System. Accessories: See your authorized Yaesu dealer.

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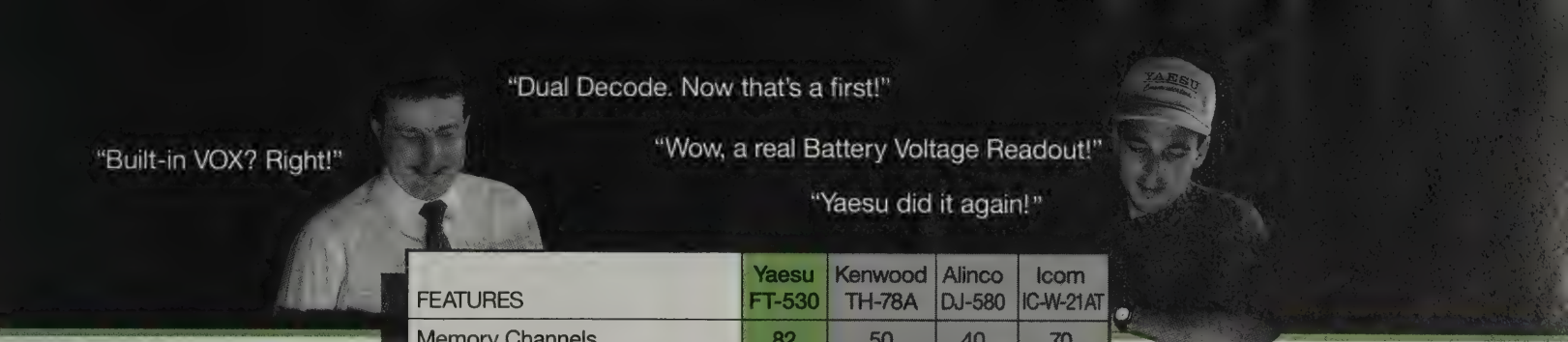

FEATURES	Yaesu FT-530	Kenwood TH-78A	Alinco DJ-580	Icom IC-W-21AT
Memory Channels	82	50	40	70
Slide-out Lithium Battery	YES	NO	NO	NO
Dual CTCSS Decoder	YES	NO	NO	YES
Battery Voltage Readout	YES	NO	NO	NO
Automatic CTCSS Tone Search	YES	NO	NO	NO
Transmit Battery Saver (Repeater & Simplex Operation)	YES	NO	NO	NO
Built-In Vox	YES	NO	NO	NO
One Touch Reverse Button	YES	NO	NO	NO
Dual In-Band Receive (V+V, U+U)	YES	YES	NO	YES
Programmable External Speaker Audio	YES	NO	NO	YES
Optional Digital Display Mic with "S" Meter	YES	NO	NO	NO
AM Aircraft Receive	YES	YES	YES	YES

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or *Prompt Shipment,* and for
Service after the Sale.

The Best vs. "the rest".

FT-530
Dual Band Handheld

- **Frequency Coverage:**
  2-Meter 130-174 MHz RX
  144-148 MHz TX
  70 cm 430-450 MHz RX/TX
- 4 TX Power levels:
  w/FNB-25: 2.0, 1.5, 1.0, 0.5W
  w/FNB-27: 5.0, 3.0, 1.5, 0.5W
- DTMF Paging and Coded Squelch
- AOT – Auto On-Timer with built-in clock and alarm functions
- IBS – Intelligent Band Select (provides automatic TX band select on scan stop)
- Backlit keypad and display with time delay
- Built-in cross-band repeat function
- APO – Automatic Power Off
- 5 Watts output w/ FNB-27 battery or 12 VDC
- 2 VFO's for each band
- **Accessories:**
  NC-42 1-Hour Desk Charger
  FNB-25 600 mAh Battery (2 watt)
  FNB-26 1000 mAh Battery (2 watt)
  FNB-27 600 mAh Battery (5 watt)
  FBA-12 6 AA Cell Holder
  CSC-56 Vinyl Case w/ FNB-25
  CSC-58 Vinyl Case w/ FNB-26/27
  E-DC-5B 12 VDC Adaptor
  YH-2 Headset for VOX
  MH-12A2B Speaker Mic
  MH-18A2B Lapel Speaker Mic
  MH-19A2B Mini Earpiece Mic
  MH-29A2B LCD Display Mic with Remote Functions
  MMB-54 Mobile Mounting Hanger

No other dual band handheld beats the FT-530 on features for performance and ease of use. With the largest backlit keypad available, 82 memories, exclusive Dual CTCSS Decode and AM Aircraft Receive, the FT-530 is simply the best value there is.

Compare for yourself, then forget "the rest." See your dealer for the best dual band handheld you can buy. The FT-530.

YAESU
Performance without compromise.℠

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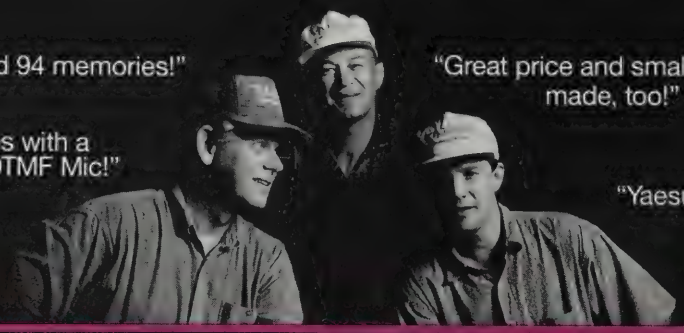
Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

"Built-in duplexer and 94 memories!"

"Great price and smallest dual band made, too!"

"Comes with a backlit DTMF Mic!"

"Yaesu did it again!"



FT-5100
Dual Band Mobile

- **Frequency Coverage:**
  2M: 130-174 MHz RX
  144-148 MHz TX
  70 cm: 430-450 MHz RX/TX
- 94 Memories (47 per band) Odd Splits In Any Memory
- Dual in-band receive (V/V, U/U or V/U Receive Operation)
- DTMF Paging and Coded Squelch Included.
- Packet Radio TNC Jack Built-In To Back of Radio
- CTCSS Encode Built-In
- Dual Receive with Balance Control
- Full Duplex Cross Band Operation
- Built-In Antenna Duplexer
- Back Lit DTMF Microphone
- Automatic 8 Level Display Dimmer
- Built-In Cross Band Repeat
- RF Output Power:
  2M: 50/5 watt (high/low)
  70 cm: 35/5 watt (high/low)
- **Accessories:**
  FTS-22 CTCSS Dual Decoder
  SP-7 External Speaker
  MW-2 Wireless Microphone/ Controller

The ultimate definition of Dual Band.

Now you can listen to two, 2 meter frequencies, or two, UHF frequencies, at the same time with In-Band Dual Receive*. Although equipped with traditional dual band, Yaesu has taken receive two steps beyond in the remarkable FT-5100. Combined in one compact mobile transceiver, it's the ultimate meaning of "dual band".

With 94 memory channels – more than any other radio in its class – and the optional MW-2 Wireless Mic, the flexibility of the FT-5100 is matchless. But to make sure the FT-5100 is complete, and an even better value, unlike the competition, there's a backlit DTMF mic included.

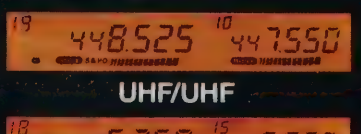
Through advanced miniaturization technology you'll find practical additions like the built-in antenna duplexer – an option on similar transceivers – and equally important, DTMF paging and coded squelch. All in the smallest dual band made!

Priced for the shrewd buyer, you've got to hear it to believe it. Dual band re-defined. Combinations like this can't be found anyplace else, so contact your nearest Yaesu dealer and tell him you want the "ultimate dual band". The FT-5100.

*In-Band Dual Receive available only on FT-5100.

Three Dual Receive Configurations

VHF/UHF



UHF/UHF

VHF/VHF

Dual band redefined.
And the choice is yours.

In-Band Dual Receive available only on FT-5100.

Here's another Yaesu exclusive! The MW-2 Wireless Mic with Remote Control.

FT-5200 Dual Band Mobile.
Offers the security of a quick release front control panel *(not available on the FT-5100)*, 32 memories, DTMF paging (w/optional FRC-4), Back-lit mic, built-in antenna duplexer and more.

YAESU

*Performance without compromise.*SM

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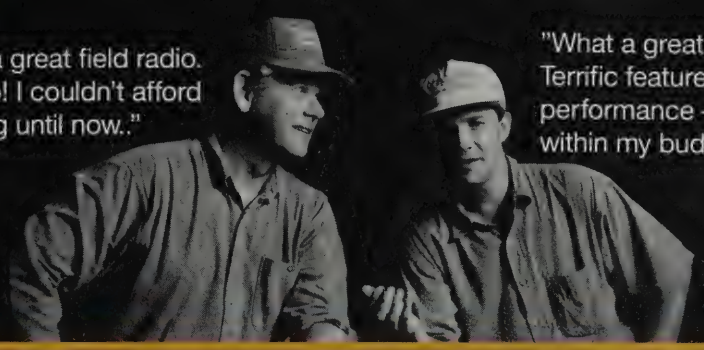
Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

NEW

"What a great field radio. Mobile, too! I couldn't afford an HF rig until now.."

"What a great price! Terrific features, high performance – and within my budget."

"Yaesu did it again!"



FT-840
Compact HF Transceiver

- Direct Digital Synthesis (DDS)
- Frequency coverage:
  RX: 100 kHz-30 MHz
  TX: 160-10 m
- IF Shift
- 100 Memory Channels (Independent TX/RX per memory)
- Twin Band Stacking VFOs
- FM* Repeater Operation Automatic 10-Meter Repeater Offset w/Selectable CTCSS Encode
- CW Reverse Feature
- Choice of Two Optional Antenna Tuners:
  FC-10 Matching External Antenna Tuner
  FC-800 External Remote Antenna Tuner
- **Accessories:** Contact your Dealer for full details.

* Optional

It's a small price to pay for such a wealth of features.

If you're trading up from an older rig, but have a budget, you want the most you can afford in top-notch HF. Then the FT-840 is for you. It's right on the money! Considering a mobile HF or field radio and doubt the quality and features of tiny HF rigs? Then the FT-840 is for you. It won't disappoint you!

Built to handle rigorous field operation, the new intense LCD display affords sharp visibility in bright sunlight. Die-cast heat sink and internal thermally switched fan keep the FT-840 running cool. Modular design circuit boards ensure operating efficiency – manufacturing excellence you'd expect in much higher priced radios.

For high performance, the FT-840 features a low noise front end that uses the latest in FET RF amplifier design. Two DDSs and magnetic encoder for silent, smooth tuning and fast switching. Twin band-stacking VFOs. And, automatic 10-m FM (optional) repeater offset with selectable CTCSS. Even two optional external antenna tuners to customize your rig.

Top of the line quality and features at a remarkably low price. Just what you'd expect from Yaesu! For high-tech performance, and a wealth of features that won't break your budget ask your dealer about the FT-840.

YAESU

Performance without compromise.℠

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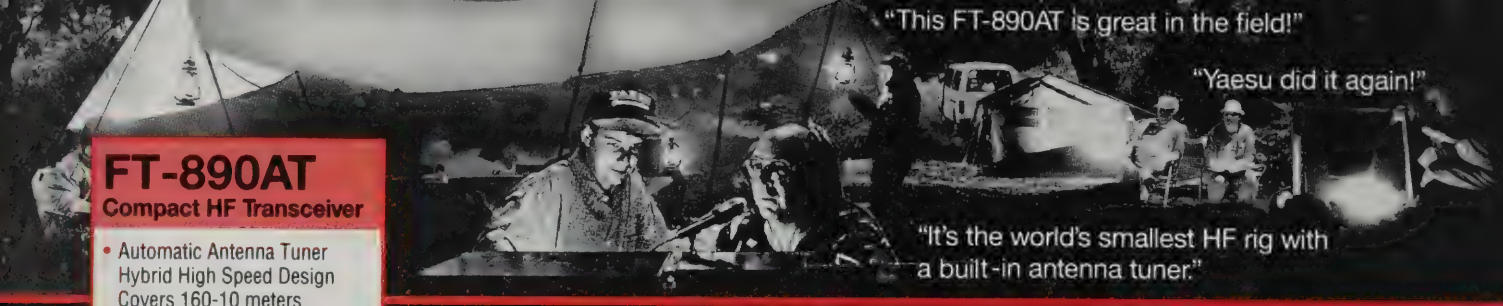


FT-890AT
Compact HF Transceiver

- Automatic Antenna Tuner Hybrid High Speed Design Covers 160-10 meters
- I.P.O. Intercept Point Optimization
- DDS-Direct Digital Synthesis
- F.S.P. Frequency Shift Speech Processor
- General Coverage Receiver 100 KHz to 30 MHz
- Pass Band Shift and 30db Notch Filter
- Noise Blanker with Adjustable Pulse Width
- Built-In Iambic Keyer
- 32 Memories plus 20 VFOs
- FM Repeater Operation Automatic 10 Meter Repeater Offset w/Selectable CTCSS Encode
- All Mode Squelch
- DFCS-Duct Flow Cooling System
- **Accessories:** Contact your Dealer for full details.

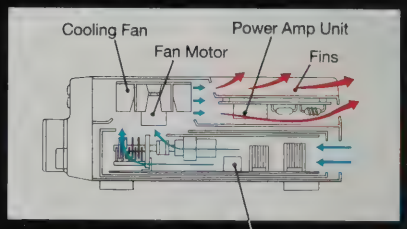
Field days and contesting are challenging. We built the FT-890AT for times when you need the high performance of a base station – like the FT-1000 – but the practicality of a compact, rugged mobile. In fact, the FT-890AT is the mobile version of the FT-1000. Designed to be the world's smallest HF with a built-in antenna tuner, its superior receiving performance is a direct result of FT-1000 technology.

Since field work is demanding, the front panel has been simplified. Seldom used VOX controls are on the back. For faster TX/RX switching, the FT-890AT has two direct digital synthesizers (DDSs). With its unique duct flow cooling system, die-cast aluminum upper case and heat sink, the FT-890AT can't be beat for superior field work and DX-peditions.

Not just a "field" radio, with the optional FP-800 AC Power Supply, MD-1C8 Desk Mic and YH-77ST Headphones you've got a performance-plus base station loaded with features and affordably priced.

To see what that means for you, contact your Yaesu dealer today.

Duct Flow Cooling System (DFCS)
Rugged aluminum top panel heat sink and internal thermally switched fan draws air through the heart of the transceiver.



Built-In Antenna Tuner
Tunes most antennas 160-10 meters

YAESU
Performance without compromise.™

If you can get an HF this compact with a built-in antenna tuner -- why not!

DVS-2 (Optional)
Digital Voice Recorder with 16 seconds of memory each on RX and TX.

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Specifications subject to change without notice. Specifications guaranteed only within amateur bands.
Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

FT-1000
All Mode HF Transceiver

- RF Power Output: Up to 200 Watts
- True Cross-band Dual Receive: Two Large Tuning Knobs
- Front Panel RX Antenna Switch: For Beverage or Loop
- Direct Digital Synthesis (DDS)
- Automatic Antenna Tuner: Built-in, 30 Memories
- Frequency Range: 100kHz-30MHz (RX), 160-10 meters (TX)
- 100 Memories: Independent ATU and Mode/IF Filter Memory
- CW Spot and Two CW Key Jacks for Maximum Convenience
- Dynamic Range: 108 dB
- Optional Digital Voice Recorder (DVS-2): 16 Seconds Each RX/TX
- **Accessories:**

SP-5 External Desk-top Speaker
LL-5 Phone Patch Unit
MD-1C8 Desktop Microphone
YH-77ST Stereo Headphones
FL-7000 500W Linear Amplifier
DVS-2 Digital Voice Recorder

Hear signals you've never heard before.

You're a competitor. You want optimum receiver performance and you want "muscle" on transmit. First with 200 watts – more power than any competing transceiver – and "hand warm" at maximum RF. It's easy to see why the FT-1000 has been judged "best overall" by top DX'ers worldwide.

For elite-class contesting and DX operation, exclusive features maximize your score. Dual Receive – Watch a multiplier or new country on one frequency, run QSOs on another. Diversity Reception – Use two antennas at different heights or opposite polarization. Extensive Cascaded IF Filtering – For "low end" battles. Dramatic front panel design features two flywheel-weighted tuning knobs, RX antenna selector and two large displays.

A perfect blend of electronics and human engineering, the FT-1000 is the Best of our Best!

To hear signals you've never heard before and get the competitive edge, see your Yaesu dealer today.

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Our rotators keep

Always Excellent Service

You can always count on...

AES®

to stock all **YAESU** products for Prompt Shipment
&
for Service after the Sale.

G-1000SDX
Medium-heavy duty HF and large VHF/UHF arrays; illuminated radial compass display; variable rotating speed with pre-sets.

G-2700SDX
Large tower-mounted antennas; illuminated radial compass display; variable rotating speed with pre-sets.

Not shown: G-800S, G-800SDX

Specifications subject to change without notice. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

YAESU G-800S

Medium/Heavy-duty for medium/large arrays. Looks like G-1000SDX. Model SDX has variable speed and presets.

Rotor diameter	7½ in.
Rotor height	12½ in.
Maximum antenna wind load	21 sq. ft.
Rotation torque	43–79 ft./lbs.
Stationary torque	288 ft./lbs.
450° rotation (S) 55 sec, (SDX) 43–93 sec.	
Mast diameter	accepts 1½ to 2½ in.
Rotor cable required	5-conductor
Shipping weight	17 lbs.

All models in stock for Same Day Shipping

Call for Price

YAESU G-1000SDX

Deluxe–Heavy-duty for Large HF arrays. Features full 450° rotation with convenient control box presets.

Rotor diameter	7½ in.
Rotor height	12½ in.
Maximum antenna wind load	23 sq. ft.
Maximum vertical load	1760 lbs.
Rotation torque	43 to 79 ft./lbs.
Stationary torque	433 ft./lbs.
450° rotation time	43 to 93 seconds
Mast diameter	accepts 1½ to 2½ in.
Rotor cable required	5-conductor
Shipping weight	19 lbs.

Call for Price

YAESU G-2700SDX

Deluxe–Heavy-duty and high-tech, for Very Large amateur antenna arrays. 450° rotation with control box presets.

Rotor diameter	10 in.
Rotor height	14 in.
Maximum antenna wind load	34 sq. ft.
Vertical load	880 lbs/1760 momentary
Braking torque	1736 ft./lbs.
Rotation torque	57.9 to 217 ft./lbs.
450° rotation time	40 to 120 seconds
Mast diameter	accepts 1⅞ to 2½ in.
Rotor cable	6-conductor
Shipping weight	30 lbs.

Call for Price

These YAESU Computer Control Interfaces allow rotator control from the serial port of your PC...

GS-23 • an optional expansion board that installs in the Controller Unit of the G-800SDX, G-1000SDX and G-2700SDX for azimuth control, and also can be used with the G-500A when coupled through the optional GX-500 Automatic Control Adapter **$299.95**

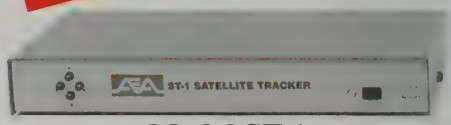
GS-232 • A GS-23 expansion board mounted in an external box for use with the G-5400B, or G-400/G-500A combination which requires two GX-500 Control Adapters **$469.95**

Satellite Tracking Hardware and Software for Yaesu 5400/5600 Rotators

Works with InstantTrack, QuickTrack, and RealTrack software; tunes **FT-736R**, **TS-790**, **IC-970**, and the **IC-475/275** combination transceivers. Provides automatic control of antennas and transceiver tuning to simplify satellite operation. As a satellite nears the horizon, antennas are pointed in the proper direction and the rig is tuned to the right up-link/down-link frequencies. As the satellite moves along its path, the antennas track and the transceiver tuning is corrected for the Doppler shift. Uses one serial port and parallel port from host computer, works with other software, like PG-AEA, PB and PG..... **$369.95**

New!...

Satellite Tracker by AEA



Model ST-1

Makes working Satellites a Breeze!

you spinning.

G-500A
Elevation rotator for space communication antennas.

G-5400B
Azimuth-Elevation combination for space communication antennas; DIN computer connection.

For the best choice in rotators, and the only rotators manufactured by a major amateur radio manufacturer, see Yaesu!

Choose from antenna rotators capable of handling light-duty TV antennas to large HF arrays as well as Azimuth-Elevation combinations for satellite applications.

Yaesu rotators are designed for smooth and quiet operation without noisy wedge brakes that can irritate your neighbors and are housed in weatherproof, die-cast aluminum enclosures permanently lubricated for maintenance-free operation. And, they're compatible with most U.S. manufactured antenna tower accessory shelves. To insure maximum satisfaction, Yaesu rotators are backed by a One-Year Warranty and 35-plus years of radio communication engineering know-how.

Contact your Yaesu dealer for full details and specifications and keep your antennas spinning!

YAESU

Performance without compromise.℠

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YAESU G-500A

Elevation rotator, for satellite earth station and other space communication antennas. 180° rotation, only

Rotor diameter	7½ in.
Rotor height	10½ in.
Maximum antenna wind load	12 sq. ft.
Rotation torque	73 ft./lbs.
Stationary brake torque	144 ft./lbs.
180° Elevation rotation time	61 seconds
Mast diameter	accepts 1½ to 2½ in.
Boom diameter	accepts 1¼ to 1⅝ in.
Rotor cable required	6-conductor
Shipping weight	16 lbs

Call for Price

YAESU G-5400B

Light/Medium duty Azimuth–Elevation rotator combination, for satellite or moonbounce applications.

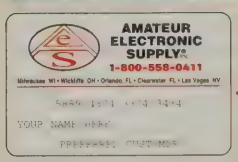
Rotor diameter	7½ in.
Rotor height	12½ in.
Maximum antenna wind load	11 sq. ft.
Maximum vertical load	440 lbs.
Elevation rotation torque	101 ft./lbs.
Azimuth rotation torque	44 ft./lbs.
Elevation brake torque	289 ft./lbs.
Azimuth brake torque	145 ft./lbs.
180° Elevation rotation time	58 seconds
360° Azimuth rotation time	61 sec.
Pointing accuracy	± 4%
Mast diameter	accepts 2 to 2½ in.

G-5400B specs continued . . .

Boom diameter	accepts 1¼ to 1⅝ in.
Rotor cable	Two runs of six-conductor.
Shipping weight	32 lbs.

Call for Price

TIP: Use Belden 8448 8-wire rotor cable for YAESU rotors. You can double-up the motor wires, or the extra wires may be used to control polarization shift, preamplifiers, etc.



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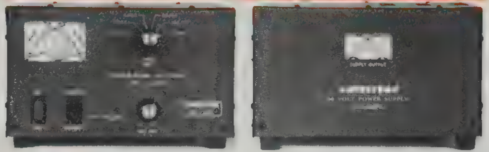
Since 1957

AMERITRON HF Power Amp

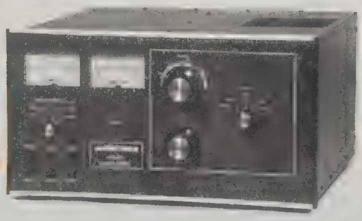


NEW! **AMERITRON ALS-600** • No tune Solid State FET Amplifier. Continuous coverage 1.5-22MHz; 10/12 Meters with easy-to-install optional kit. 700W PEP, 500W CW. Illuminated Cross-Needle SWR/Wattmeter, SWR and overload protection, front panel ALC control. Transmit, ALC, SWR LED indicators. Includes separate power supply which will operate on 100-130VAC or 220-250VAC. Both units are 6" x 9½" x 12" **$1099**

NEW! **AMERITRON ALS-500M** • No tune Solid State FET Amplifier. **Ideal mobile amplifier!** Continuous coverage 1.5-22MHz; 10/12 Meters with easy-to-install optional kit. (4) 2SCC2879's deliver 600W PEP, 400W CW with <100W drive. Illuminated Cross-Needle SWR/Wattmeter, SWR and overload protection, remote ON/OFF control. Requires 13.8VDC @ 80A peak for PA and separate 12-15VDC @4A for control and bias circuits. Compact!- 3 ½ " x 9" x 15" **$679⁹⁵**

AMERITRON AL-80B • Covers 1.8. 3.5, 7, 14, 18, 21 and 24MHz. Single 3-500Z; 85W drive for 1KW PEP SSB or 850W CW out. Built-in supply. 14"w x 8"h x 15½"d, 52 lbs **$1069**

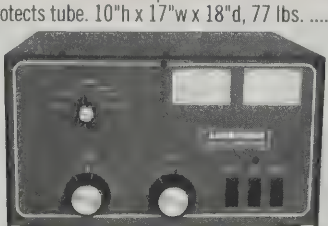
AL-82
AL-1200
AL-1500
similar in appearance



AMERITRON AL-82 • Covers 160-12M. (2) 3-500Zs, two bias settings for CW/RTTY or SSB. 1500W continuous output at nearly 70% plate eff. Built-in supply with1.8KW CCS rated Hypersil® transformer. 10"h x 17"w x 18"d, 76 lbs..... **$1679**

AMERITRON AL-1200 • Covers all ham bands 1.8 to 21MHz and WARC bands. Single Eimac 3CX-1200A7; 110W drive for 1.5KW output. Heavy-duty silver-plated tank components, built-in commercial rated power supply with Hypersil® transformer. 10"h x 17"w x 18"d, 83 lbs............................ **$1749**

AMERITRON AL-1500 • Covers 160-12M. Single Eimac 8877 final tube delivers 1500W output with 65W drive.Time delay start-up protects tube. 10"h x 17"w x 18"d, 77 lbs. **$2199**



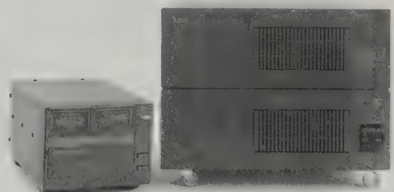
AMERITRON AL-811 Linear Amplifier • Covers 160-12M. (3) 811A tubes, 600W PEP SSB and 500W CW output. Tuned input is an easy match for solid state rigs. Vernier drive plate tuning, illuminated grid and plate voltage/current meters. Built-in 120V power supply. 16"d x 13¾"w x 8"h, 30 lbs...... **$589⁹⁵**

AMERITRON AL-811H Linear Amplifier • Similar to AL-811, but has (4) tubes and rated 800W PEP **$719⁹⁵**

The HF amplifiers shown on this page are user modifiable for 10-meters for those with a valid, current amateur radio license.

ICOM HF Power Amps

ICOM IC-2KL • Covers 160-12M. *Solid-state*, no tune-up. 50 to 80W drive provides 500W PEP SSB output or 500W CW for Separate amplifier and 110/220V power supply units. Automatic operation with ICOM transceivers. **Both units are:** 4½"h x 9½"h x 15⅛"d, total weight: 45 lbs .... CALL



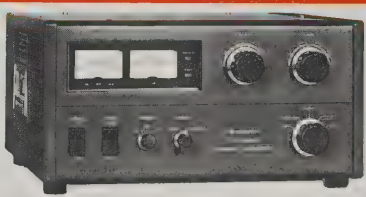
ICOM IC-4KL • Covers 160-12M. Solid-state, no tune up. Separate controller and amplifier. Uses four - 8 transistor modules; 1KW output @ 100% duty cycle. Built-in automatic antenna tuner with memory and 40V/60AMP power supply. Dual meters show SWR, final amplifier current and temperature, and output. Automatic operation with ICOM transceivers. **Controller unit:** 5¾"h x 7¾"w x 13½"d, 66 lbs. **Amplifier unit:** 11¾ "h x 16¾ "w x 18"d, 79 lbs .... CALL

JRC HF Power Amp

RPS or Air Freight Shipment only.

JRC JRL-2000F • **Solid-State** - Incorporates 48 RF power MOSFETS to ensure low distortion and clean output, plus a high speed automatic tuner with a memory capacity of 1820 channels. In addition, it has a built-in high efficiency switching power supply, an automatic antenna selector and a wireless remote control. Full break-in capability. Covers 1.8, 3.5, 7, 10, 14, 18, 21, and 24 MHz bands. Drive: 100W maximum. Rated output for SSB is 1KW at 100% duty cycle, continuous. FSK/FM is 1KW at 100% duty cycle, 1/4 hour. 12"h x 17"w x 16"d, 85 lbs....................................... **$3999**

KENWOOD HF Power Amp



RPS or Air Freight Shipment only.

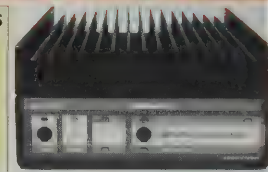
KENWOOD TL-922A • Covers 160-15M. (2) 3-500Zs; 80W drive for 1500W PEP SSB output. Rugged, heavy-duty electrical and mechanical construction of the highest quality. Case has convenient recessed carrying handles. Built-in power supply. 15½" x 7½"h x 16¾"d, 80 lbs .... CALL

YAESU HF Power Amp

YAESU FL-7000 • Covers 160-12M. Solid-state, "no tune" with built-in automatic antenna tuner and power supply. 70W drive for 600W output. Full break-in for CW, HF Packet and AMTOR. Tuner memory holds antenna selection and tune settings. Circuit automatically turns off amp and attempts to rematch if SWR exceeds 2:1. Automatic selection of 4 antennas with *optional.* unit. 5"h x 15"w x 15"d, 66 lbs ...... CALL

RF Concepts VHF/UHF Amps

- Single/Duoband models
- FM/CW/SSB modes
- GaAs FET preamplifier
- Overdrive protection
- 12V DC
- RFC 1-year warranty



Model	input	output	amps	Price
2-meters				
2-23	0.2-5W	30W @ 2W in	5	$139⁹⁵
2-315	30-50W	150-170W	25	289⁹⁵
VHF 1-60*	1W	60 @ 1W in	10	239⁹⁵
2-417	0.2-50W	170W @ 45W in	22	289⁹⁵
220MHz				
3-22	5W	20W	4	$149⁹⁵
3-211	2W	110W	22	339⁹⁵
3-112	0.2-15W	120W @10W in	12	339⁹⁵
3-312	30W	120W	22	309⁹⁵
440MHz				
4-32	3W	20W	4	$184⁹⁵
4-110	10W	100W	22	369⁹⁵
4-310	30W	100W	20	369⁹⁵
UHF-50*	3W	50W	10	279⁹⁵
Dual Band - 2m/440 MHz				
2/70*	(3W) (5W)	(30W) (20W)	6	$239⁹⁵
2/70G	(3W) (5W)	(30W) (20W)	6	259⁹⁵
2/70H*	(28W) (20W)	(200W) (125W)	40	719⁹⁵

*Denotes No Receiver Preamplifier

MIRAGE VHF/UHF Amps

SSB/FM/CW • Automatic antenna changeover with adjustable SSB delay • 10dB gain Low Noise receive preamp • Overload protection • Optional remote control • Mobile use, or Base with an adequately rated DC power supply (ASTRON power supplies recommended) • MIRAGE 5-year Warranty, 1 year on RF power transistors.

Model	MHz	input	out	amps	preamp	SALE
A-1015G	50-54	10W	150W	23	yes	$339⁹⁵
A-1035G	50-54	10W	350W	23*	yes	559⁹⁵
B-23	144-148	2W	30W	5	no	114⁹⁵
B-23G	144-148	2W	30W	5	yes	154⁹⁵
B-215G	144-148	2W	150W	20	yes	319⁹⁵
B-108G	144-148	10W	80W	12	yes	194⁹⁵
B-1016G	144-148	10W	160W	25	yes	319⁹⁵
B-1030G	144-148	10W	300W	48	yes	589⁹⁵
B-1060G	144-148	10W	600W	52*	yes	929⁹⁵
B-2516G	144-148	30W	160W	25	yes	269⁹⁵
B-2530G	144-148	30W	300W	48	yes	589⁹⁵
B-2560G	144-148	25W	600W	52*	yes	929⁹⁵
B-5016G	144-148	50W	160W	24	yes	269⁹⁵
B-5030G	144-148	50W	300W	48	yes	569⁹⁵
B-5060G	144-148	50W	600W	45*	yes	929⁹⁵
C-22	222-225	2W	20W	5	no	114⁹⁵
C-22G	222-225	2W	20W	5	yes	154⁹⁵
C-211G	222-225	2W	110W	20	yes	304⁹⁵
C-106G	222-225	10W	60W	12	yes	204⁹⁵
C-1012G	222-225	10W	120W	5	yes	304⁹⁵
C-1022G	222-225	10W	220W	20*	yes	559⁹⁵
C-2512G	222-225	30W	120W	20	yes	289⁹⁵
C-2522G	222-225	30W	200W	42	yes	559⁹⁵
C-5012G	222-225	50W	120W	20	yes	289⁹⁵
C-5022G	222-225	50W	240W	42	yes	539⁹⁵
D-15N	425-450	2W	15W	3	no	174⁹⁵
D-26N	430-450	2W	60W	12	no	244⁹⁵
D-1010N	430-450	10W	100W	15	no	354⁹⁵
D-3010N	430-450	30W	100W	20	no	329⁹⁵
D-100-ATVN	430ATV	1W	52W	20	no	354⁹⁵
D-1010ATVN	430ATV	10W	100W	20	no	354⁹⁵

* at 28VDC **N** denotes Type-N connectors

RC-1 Remote Control Head • for all **MIRAGE** amplifiers except the B-23S, B-23G, C-22G and D-26N................**$42⁰⁰**

DAVIS
Computerized Weather Stations

Model 7440
$349.95
For WeatherSTAR options - See Price List

Gives Wind, Temperature, Rain and Barometric Trend, Humidity, Dew Point, Alarms. Download and Graph Data on your PC – remote with Modem Interface. Central Junction Box for Easy Hook-up, Modular Design. Perfect for NOAA Weather Monitoring Stations.

• Barometric pressure from 26.00 to 32.00 in. of mercury (660 to 812 mm or 880 to 1084 mb). • Trend arrow shows if pressure is stable or increasing or decreasing • Alarm for change greater than .02, 0.4, or .06 inches of mercury

HUMIDITY
• Inside humidity from 10% to 90%. • Outside humidity optional, requires external humidity/temp sensor, below High and low humidity readings with time and date • Alarms for high/low humidities.• 1⅞" x 4⅜" LCD display

External Humidity/Temp Sensor • Allows the 7740 to measure outside humidity, dew point and temperature. Comes with 40 ft. interconnecting cable **7859 $109.95**

Model 7425
$169.95
For WeatherSTAR options - See Price List

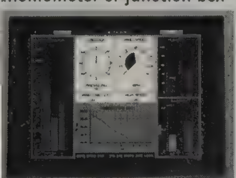
TEMPERATURE
• Inside temperature from 32°F to 140°F (0°C to 60°C) • Outside temperature from 50°F to 140°F (-45°C to 60°C) • High and low temperatures with time and date • Alarms for high and low temperatures.

WIND SPEED AND DIRECTION
• Wind direction in 1° or 10° increments • Wind speed to 126 mph (203kph, 109 knots for 56.0 m/s) • High wind gust with time and date • Alarm for high wind speed.

WIND CHILL FACTOR
• Wind chill to -134°F (-92°C) • Low wind chill with time and date • Alarm for low wind chill

TIME AND DATE
12 or 24 hour • Time alarm • Date • ¾" x 3¼" LCD display

OPTIONS
Rain collector 7852 self dumping, monitors rainfall - daily and accumulated in 0.1" increments • Extension cables for anemometer or junction box

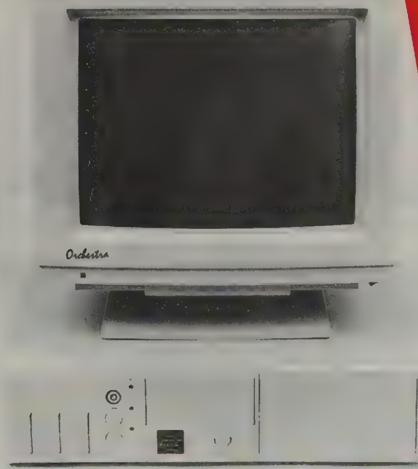


WeatherSTAR Link Interface
Software, cable, serial port adapters to connect IBM compatibles to WeatherSTAR. stations **7862 $139.95**

New Wave Antenna
PORTAPLE Portable Mast

Collapsed 5'8" – extends to 26'
Great for portable or temporary antenna installations! This telescoping 7-section 6063-T832 polished aircraft aluminum mast tapers from 2" to 1¼" and is easily raised by one person at ground level in seconds. May be rotated at any section along its length or locked in place. 8.5 lbs......**$134.95**

Park-on Mount
$99.95
Sturdy welded steel mount device receives and supports base of mast. Stabilizes by a vehicle or weight on the mount.



New! AES®
IBM Compatible PCs

✓ Highest Quality, Maximum Performance
✓ Assembled in the U.S.A.
✓ American made parts used whenever posssible.
✓ Two year Warranty on all components, No Extra Charge
✓ FCC-B Certified
✓ A true Plug & Play Computing Solution

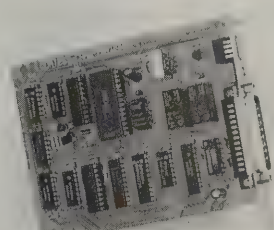
AES 486DX • *Call for Price*

- Desktop Case – 7 Drive Bays
- VESA Local Bus Motherboard
- 486 DX33 CPU
- 4Mb High Speed RAM
- 340Mb Hard Disk
- VLB IDE/IO Card
- 1 Mb SVGA Video Card
- Keytronics 101 Key Ergonomic Keyboard
- 3.5 (1.44) and 5.25 (1.2) High Density Floppy Disk Drives
- .28 SVGA Non-interlaced Monitor
- DOS 6.2 and Windows 3.1

AES 486SX • *Call for Price*

- Slimline Case Design–VLB
- Intel 486 SX-33
- Integrated SVGA 1024 x 768 Video
- 213Mb Hard disk
- 3.5 (1.44) and 5.25 (1.2) High Density Floppy DIsk Drives
- Keytronics 101 Ergonomic Keyboard
- .28 SVGA Monitor
- DOS 6.2

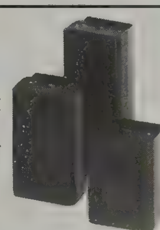
The Two Year Parts and Labor Limited Warranty is handled by: CHANEY SYSTEMS of New Berlin, WI



UNIFIED Microsystems
W9XT Contest Card for IBM™ PC and Compatible

This 5" x 4½" plug-in card occupies a single 8-bit PC slot, does voice recording and playback, and CW keying. Enough memory to store a full 16 seconds of voice which can be partitioned between four messages of different lengths for playback on command. Microphone input is sampled at an 8-kHz rate resulting in audio that is high quality and natural sounding.. It's non-volatile and does not use any disk space. On CW, the card frees up the PC port, and uses a relay which allows operation with positive or negative-keyed rigs. The W9XT Card works with all rigs and is compatible with popular logging programs. A stand alone support program is included with the card. Low RF emissions - FCC Class-B certified. **$149.95**

PERIPHEX
POWER PACKS for Longer QSOs



These Super Packs feature short circuit protection and overcharge protection, and a 12 month warranty. These and other models available for late model **ICOM** HTs.

BP-7S • 13.2V @ 1200mah . . **$65.00**
BP-8S • 8.4V @ 1200mah **65.00**
BP-84S • 7.2V @ 1400mah . . . **40.00**
BP-85S • 12V @ 800mah **76.00**

See Price List for other Models.

GLEN MARTIN ENGINEERING

ROOF-TOP TOWERS!

BUILT LIGHT AND TOUGH WITH 6061-T6 ANODIZED ALUMINUM

UPS SHIPPABLE from the factory

MODEL	HEIGHT	MAX WIND SURFACE (FT²)	PRICE
RT-832	8 ft.	8 @ 85 MPH	$189.95
RT-936	9 ft.	28 @ 85 MPH	$328.75
RT-1832	17½ ft.	12 @ 85 MPH	$467.50

Constructed of rugged 6061-T6 anodized aluminum and stainless steel. Top plates are stamped for the Yaesu GS-065 trust bearing and will fit Hy-Gain, Alliance & Yaesu 4-bolt rotators.

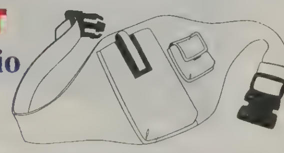
Bel Merit Multimeters

DM-10S Easy Tester (right) • $24.95
3-1/2 digit LCD display • automatic polarity • 17 ranges • Manual range selection • AC volts: 750V maximum • DC volts: 1000V maximum. • Resistance: up to 2000K Ω • DC Current: to 200mA • Diode & battery test • 4½" x 2¾" x 0.94", 5 oz • Includes test lead, battery and case

DM-3000 & DM-3050 Wide Range Multimeters (left)
• Big, 2½"w x 1¼"h, 3½ digit LCD readout • DM3000 has 8 functions and 24 ranges, DM3050 has 10 functions and 27 ranges • 10M Ω input • Manual selection • AC: 750V • DC: 1000V • Ω to 20M • DC Current: to 20A • Capacitance to 20uF • Diode test • DM-3050 has continuity beeper **and** tests frequency test to 200kHz • 3½"w x 7½"h x 1½"d, 10½ oz. Test leads and 9V battery.

DM-3000 • $49.95 – DM-3050 • $59.95

TUNE BELT
Handheld Radio Belt



With this unique belt you get an integrated pouch and belt for less that the cost of most carrying cases. Strap it on! – it's comfortable, convenient and protective; and is available in two sizes to fit virtually any handheld.

HH-1PL • Radio belt for up to 8" HT ....**$ 16.95**
HH-2PM • Radio belt for up to 6" HT, w/batt pocket ... **17.95**
HH-2PL • Radio belt for up to 8" HT, w/batt pocket **17.95**

Call Toll Free… use your Credit Card

practical Sideband

THE MOST RUGGED COMMERCIAL GRADE HF SYSTEM IS NOW AVAILABLE TO YOU!

Get a GREAT MOBILE SIGNAL

- Full Ham Band coverage
- Type approved for Marine use
- Data modes supported
- 644 preprogrammed channels
- Full 150 watts output
- Extremely rugged system

Highest Value - The SG-2000 is under $2000
Up to 8 Control Heads - Intercom between heads
Remote Control Options - by telephone & computer
Instant tuning - SG-230 computer control coupler
SG-303 Mobile whip - Covers 1.8 to 30 MHz
QMS - Allows "No Holes" HF mobile installations
Call SGC (206) 746-6310. Free information package

SGC
Single Sideband Communications and Systems Engneering

SCG Building, P.O. Box 3526 Bellevue, WA 98009 USA FAX: 206-746-6384

The Dream Ham Rig

Radio amateurs will appreciate the rock solid stability of the SG-2000 which makes it ideal for both voice and data operations. Because the SG-2000 may be fully controlled via its RS-232 interface: remote control via computer is possible. And that full 150 watts of power makes a tremendous difference whether you're mobile or operating from a fixed location.

> "...Signal reports have been excellent, with favorable comments on the audio. More and more of my operations are in various digital modes, and the SG-2000 seems to excel in this area. In short I am very well pleased with my purchase and feel I most definitely received good value for the money...."
>
> -John M. Knight
> K5HGX/NNN0OIL

Hams with boats aren't the only ones who will appreciate the SG-2000. Anyone with a need for multiple control heads should look seriously at tomorrow's radio today.

Up to 8 remote control heads may be used on a single radio, making the radio ideal for mobile applications such as jeeps, passenger vehicles, vans and even recreational vehicles. As a bonus, the full frequency coverage makes MARS and CAP operation a snap - especially when used with the SG-230 Smartuner (details inside).

Commercial grade construction

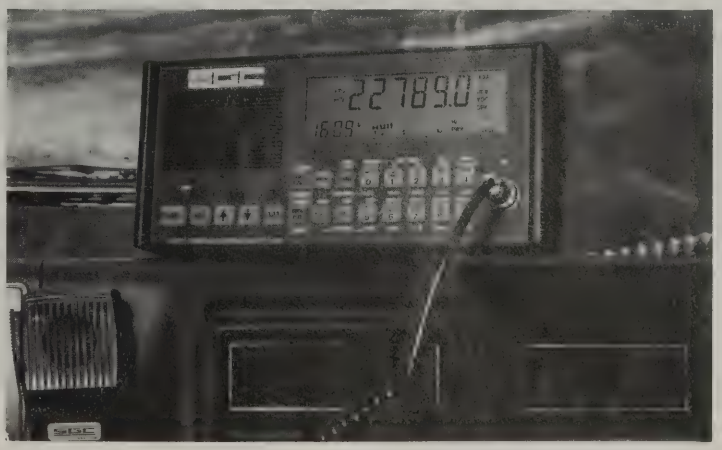
Commercial radio users will be impressed with the SG-2000's wide range of operating parameters. Equipped with a continuous duty cooling fan, the SG-2000 has already been on the air continuously key down for more than a year. Those familiar with SGC know that this kind of service is what the radios were designed for.

In addition to the standard push button control head, the SG-2000 may be equipped with a control head designed for channeled operation. This control head, which also mounts in a standard aircraft avionics panel, is ideal for operation when less than 100 channels are used on a regular basis and where simple channelized operation and a simple user interface are required. The SG-2000-A (avionics version) also includes an interface to the aircraft intercom system.

Paramilitary operation of the SG-2000 has been proven in Asia and in South America where the radio turns in exceptional performance when equipped with shock mounting and waterproof and dust proof accessories. The PRC-2250, a specially ruggedized version of the SG-2000, is available with optional MIL STD 188-141A Automatic Link Establishment. On request, SGC clients may also equip with various levels of voice encryption (availability for export is subject to State Department regulations).

Special software for the radio is available for special missions. A differential Global Positioning System (GPS) beacon package by-passes startup monitoring of the international distress frequency (2182 KHz). The "HK" (Hong Kong) version of the SG-2000 software allows the unit to transmit only on the 12 channels allowed by Hong Kong radio authorities. Special oil platform software allows transmitter testing of the automatic alarm generator on frequencies other than 2182 KHz in compliance with international platform regulations.

With this many options, it's easy to see what we mean: Whatever your mission, at sea, on land or in the air, the SG-2000 may be configured to exceed your needs now and for years to come.



Use up to 8 control heads on a single SG-2000!

SG-2000 SPECIFICATIONS

©2/94 SGC, Inc.

Tuning (Channel Mode):	644 ITU + 100 defineable		4 KHz at -60 dB (1:1.8)
Tuning (Frequency Mode	):100 Hz steps	Audio output:	4W < 10% THD
Scanning	By Channel or Frequency	Clarifier range:	±600Hz in 100Hz steps
Frequency stability:	±10 Hz	Squelch:	Syllabic type, adjustable
Frequency display:	Huge LCD	Transmitter power our:	150 watts PEP/CW
Modes:	SSB, CW, AME, data port	Sideband suppression:	Better than -50dB @ 1400 Hz
Protection against:	Power, antenna faults	Harmonic suppression:	Better than -63dB
Alarm generator:	2182 KHz ITU and CCIR	Carrier suppression:	Better than -55dB
Operating temperature:	-45° to 85° C	Noise suppression:	Better than -60dB
Approvals:	FCC Parts 80, 87 and 90	T/R (R/T) switching time:	10mS nominal
Receiver Sensitivity:	.5µV for 10dB SNR	AFSK I/O impedance:	600Ω
Selectivity:	2.4 KHz at -6 dB;	Max. Control Heads:	8

Local control:	One on radio	
Max. distance to Remote:	s50 meters each	
Intercom:	Between all heads	
Overall Dimensions:	11.7 (H) x 25.4 x 38 (L) cm	(W)
	4.75 (H) x 10 x 15 (L) in.	(W)
Weight:	5.4 kg (12 lbs)	
Color:	Black	
Front panel:	Splash proof, removable	

SGC, Inc. P.O. Box 3526 Bellevue, WA 98009 USA *Tel:* (206) 746-6310 *or* 1-800-259-7331 *Fax:* (206) 746-6384

Increase your range with a high performance antenna coupler.

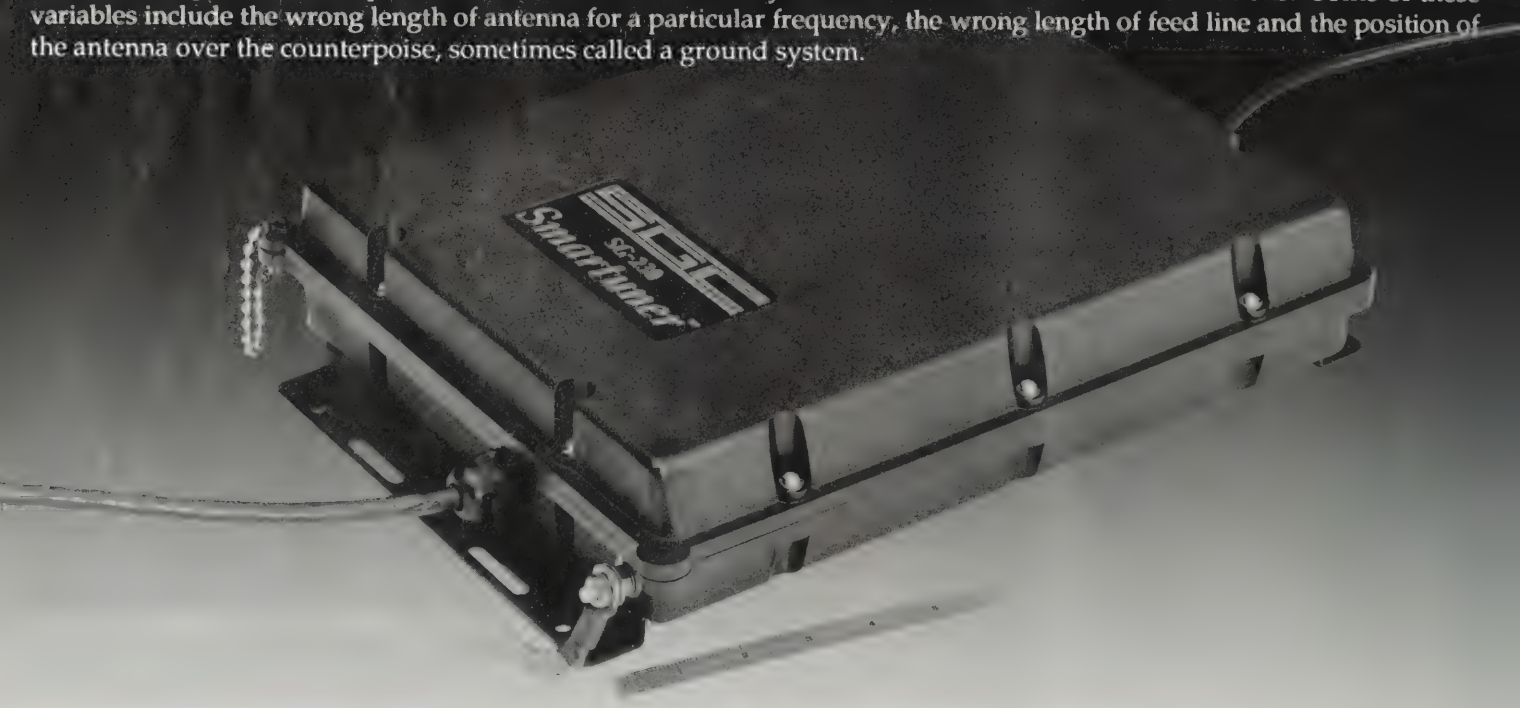
The SG-230 *Smartuner*™

Even using a highly efficient transceiver like the SG-2000 doesn't assure you of a great signal. That's because the radio signal must be coupled effectively to an antenna system. The only antenna coupler which does the job automatically, has a locking feature and may be used with *any* radio is the SG-230 Smartuner.

A Secret Revealed

We'd like to share some of the secrets behind big signals because there is a tremendous amount of misunderstanding about the role of antenna couplers.

The reason you need an antenna coupler is to match the transceiver to the antenna. You can't just plug a radio into an antenna and get maximum performance. There are too many electronic variables between installations. Some of these variables include the wrong length of antenna for a particular frequency, the wrong length of feed line and the position of the antenna over the counterpoise, sometimes called a ground system.



There Are Alternatives

Granted, you can adjust a manual tuner each time you use the radio. But if you do, you'll discover it's pretty inconvenient to be fiddling with knobs on a boat in a building seaway.

Granted, you can use a so-called "tunable whip antenna". But stopping a car to re-tune an antenna on a busy freeway at night in the rain is not only an unnecessary nuisance, it's downright dangerous.

And granted, you could use some lesser brand of antenna coupler. But other manufacturers build antenna couplers designed to lock you into buying their radio product *regardless of whether that product is really right for you.*

Designing a Breakthrough

It occurred to SGC that because proper antenna coupler adjustment requires constant monitoring, it would be a perfect task for a high speed microprocessor (computer) chip. So several years ago, SGC engineers set off to perfect a unique solution to the antenna coupler problem.

The breakthrough result of their efforts was the SG-230 Smartuner. The Smartuner computer system continuously monitors all antenna parameters and instantly selects the right values from more than half a million combinations in its matching circuit to make sure everything is tuned right.

SGC, Inc. P.O. Box 3526 Bellevue, WA 98009 USA *Tel:* (206) 746-6310 *or* 1-800-259-7331 *Fax:* (206) 746-6384

It Doesn't Stop There

The SG-230 has a 500 position non-volatile memory built in. This means the coupler *remembers* what it has done before, under the same conditions. Once the SG-230 is operated on a given frequency, the Smartuner remembers the correct settings in one of 500 non-volatile memory positions. That means when the power goes off, you don't lose settings in memory.

You'll Never Run Out of Memory

The SG-230 includes a sophisticated memory management program that overwrites the least used information and updates the memory.

Highly Reliable

If there's one word which sums up the SG-230, it is reliability. The Smartuner has been in production for nearly five years. During that time it has been across every ocean, desert and inhospitable piece of land and hostile airspace in the world. While we don't usually talk about our clients, we are proud of the record of the Smartuner in special services for clients whose first initials are U.S. and U.N.

Testimony of a sailor

You don't need to put the Smartuner on a jeep to appreciate its design. Throw it into the aft lazarette of a sailboat, hook up an insulated backstay and talk around the world. As Paul Charboneau of the sailing vessel "Assez" told us recently:

"Throughout our voyage; at anchor, or at sea; on the Ham bands or Marine frequencies, the tuner did it's job absolutely perfectly, and without any (read zero) malfunctions. It works as well today as it did when I installed it. (Incidentally, the absolute first contact was, at 50 watts, Gulfport, MS to England.)

I do perhaps have the ideal installation...a steel cutter...a 53 foot backstay...salt water...couldn't get much better propagation. However, electronics don't like salt water...the quality of your construction has enabled this conjunction of opposites to function without a hitch for longer that it should. My sincere congratulations: an "attaboy" if you will!" Thanks for a product that does what it should do..."

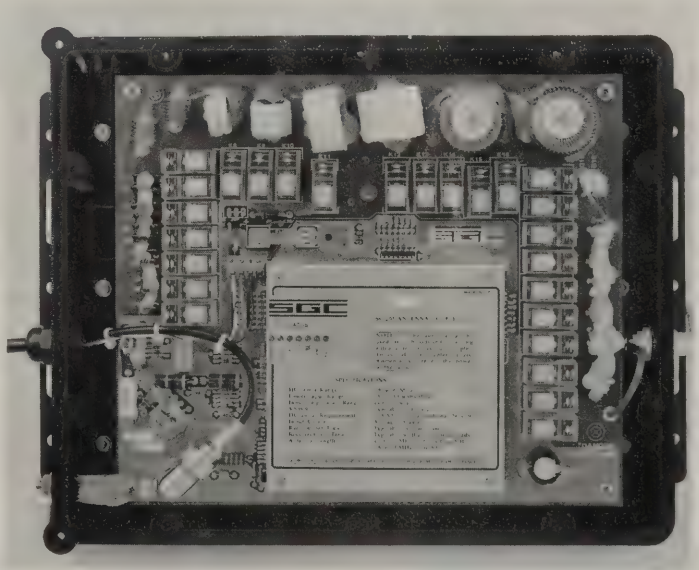
Hams want facts

Still undecided? Check out the extensive manual for the SG-230 Smartuner. In it, you'll find dozens of important tips on how to have the "biggest signal on the band" without spending the most money. All it takes is some wire and an SGC Smartuner.

The SG-230 Smartuner is an all-band computer controlled waterproof 150 watt antenna tuner which features 500 frequency memories. Once your Smartuner learns your antenna and operating frequencies, retuning occurs at blazing speed: typically under 10 milliseconds.

Bigger *IS* better

While marveling at the SG-230 you may ask yourself "Why is the SG-230 slightly larger than other units?" The reason is simple: SGC uses larger components than other manufacturers. These large components are less likely to fail because there is less component heating.



When you add it all up, the SG-230 is the finest antenna coupler on the market today. Bar none.

SG-230 *SMARTUNER* SPECIFICATIONS

©2/94/ SGC, Inc.

HF Frequency Range:	1.8 to 30.0 MHz
Power Input Range:	5 to 150 watts (PEP)
Input Impedance Range:	45 to 55 ohms
VSWR: (Typical)	Typically less than 2:1
DC Input Requirement:	13.8 VDC
DC Operating Range	10.5 to 15 VDC
Input Current: Average:	.9 amps
Random set time:	Typical: less than 2 seconds
Recurrent set time:	Typical: less than 10 milliseconds
Antenna Length:	8 to 80 ft., 3.5-30 MHz 23 to 80 ft., 1.8-30 MHz
Installation:	Any position
Operating Temperature:	-35° to +70°C
Size:	16 x 12 x 3 inches
Weight:	8 pounds (3.5 kilos)
Case Construction:	Plastic ABS weatherproof case
Control Cable:	SGC special cable (9 feet coaxial with 4 conductor wires in the same jacket)

SGC, Inc. P.O. Box 3526 Bellevue, WA 98009 USA *Tel:* (206) 746-6310 *or* 1-800-259-7331 *Fax:* (206) 746-6384

MIRAGE Amateur Band Amplifiers • VHF

ALL VHF MODELS FEATURE . . .

- GaAs-FET Receive Pre-Amp
- Noise Figure less than 0.6 dB
- Adjustable Pre-Amp Gain to Prevent Intermodulation
- Pre-Amp Gain Over 20dB on High Position
- Variable automatic Relay Switching with delay adjustment for SSB
- High VSWR Shutdown
- Intermittent Duty Cycle With Internal Over-Temperature Protection
- Complete Front Panel Switching
- All Mode Operation (SSB, CW or FM)
- Overcurrent Shutdown
- Remote Control Outlet

WARRANTY: Amplifiers are warranteed for 5 years (parts & labor), except power transistors (1 year).

6 METER AMPLIFIERS — 50 - 54 MHz

A1015-G
10W In - 150W Out

A1035-G
10W In - 350W Out

SPECIFICATIONS:

	A1015-G	A1035-G
RF POWER IN	1 to 15 Watts	2.0 to 15 Watts
RF POWER OUT	150 Watts	350 Watts
CURRENT/ VOLTAGE	18-22 Amps @ 13.8 Volts	18-22 Amps @ 27-30 Volts
SIZE	12" X 3" X 5.5"	12" X 3" X 5.5"
WEIGHT	5 lbs.	5 lbs.

2 METER AMPLIFIERS — 144 - 148 MHz

B-23 (without pre-amp)
2W In - 30W Out

FEATURES
Handie-Talkie Amp
Has No Power or VSWR Shutdown
No Remote Outlet

B-23-G
2W In - 30W Out

FEATURES
Compact Size
Complete Front Panel Switching
Has No VSWR Shutdown
No Remote Outlet

B-215-G
2W In - 150W Out

FEATURES
Designed for Handie-Talkies

SPECIFICATIONS:

	B-23	B-23-G	B-215-G
RF POWER IN	100mW to 5 Watts	100mW to 5 Watts	200mW to 5 Watts
RF POWER OUT	30 Watts	30 Watts	150 Watts
CURRENT/ VOLTAGE	5 Amps @ 13.8 Volts	5 Amps @ 13.8 Volts	20-25 Amps @ 13.8 Volts
SIZE	4" X 2" X 4.5"	3.5" X 2" X 7"	12" X 3" X 5.5"
WEIGHT	1 lb.	1.25 lbs.	5 lbs.

B-108-G
10W In - 80W Out

FEATURES
Excellent for Handie-Talkies

B-1016-G
10W In - 160W Out

FEATURES
1 Watt in will give
60 Watts out

B-2516-G
30W In - 160W Out

B-5016-G
50W In - 160W Out

SPECIFICATIONS:

	B-108-G	B-1016-G	B-2516-G	B-5016-G
RF POWER IN	200mW to 15 Watts	100mW to 15 Watts	200mW to 40 Watts	35W to 55 Watts
RF POWER OUT	80 Watts	160 Watts	160 Watts	160 Watts
CURRENT/ VOLTAGE	10-12 Amps @ 13.8 Volts	20-25 Amps @ 13.8 Volts	17-22 Amps @ 13.8 Volts	17-22 Amps nom. @ 13.8 Volts
SIZE	8" X 3" X 5.5"	12" X 3" X 5.5"	12" X 3" X 5.5"	12" X 3" X 5.5"
WEIGHT	3 lbs.	5 lbs.	5 lbs.	5 lbs.

B-1030-G
10W In - 300W Out

FEATURES
Excellent for Handie-Talkies

B-2530-G
25W In - 300W Out

FEATURES
Linear Curve: 1W-30W, 45W max
High Speed RF Switching Relay

B-5030-G
50W In - 300W Out

FEATURES
High Speed RF Switching Relay

SPECIFICATIONS:

	B-1030-G	B-2530-G	B-5030-G
RF POWER IN	1W to 10 Watts	1W to 45 Watts	1W to 60 Watts
RF POWER OUT	300 Watts +	300 Watts +	300 Watts +
CURRENT/ VOLTAGE	48 Amps nom. @ 13.8 Volts	48 Amps nom. @ 13.8 Volts	48 Amps nom. @ 13.8 Volts
SIZE	10" X 12" X 5"	10" X 12" X 5"	10" X 12" X 5"
WEIGHT	15 lbs.	15 lbs.	15 lbs.

MIRAGE Amateur Band Amplifiers • VHF

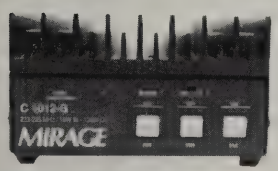
2 METER AMPLIFIERS — 144 - 148 MHz (CONTINUED)

	B-1060-G	B-2560-G	B-5060-G
	10W In - 600W Out	25W In - 600W Out	50W In - 600W Out
FEATURES	Excellent for Handie-Talkies		
SPECIFICATIONS:			
RF POWER IN	1 W to 10 Watts	10 W to 30 Watts	30 W to 60 Watts
RF POWER OUT	600 Watts	600 Watts	600 Watts
CURRENT/ VOLTAGE	42-52 Amps @ 28 Volts*	42-52 Amps @ 28 Volts*	35-45 Amps @ 28 Volts*
SIZE	10" X 12" X 5"	10" X 12" X 5"	10" X 12" X 5"
WEIGHT	15 lbs.	15 lbs.	15 lbs.

* Two 13.8 Volt power supplies can be combined in a series to provide 27.6 Volts for operating these new amplifiers. Application information is provided in the operations manual to safely combine power supplies.

1 1/4 METER AMPLIFIERS — 223 - 225 MHz

	C-22 (Without Pre-Amp)	C-22-G	C-106-G	C-211-G
	2W In - 20W Out	2W In - 20W Out	10W In - 60W Out	2W In - 110W Out
FEATURES	Compact Size No Power or VSWR Shutdown No Remote Outlet Excellent for H/T's	Compact Size No VSWR Shutdown No Remote Outlet Excellent for H/T's	Excellent for H/T's	Excellent for H/T's
SPECIFICATIONS:				
RF POWER IN	100mW to 5 Watts	100mW to 5 Watts	300mW to 15 Watts	300mW to 4 Watts
RF POWER OUT	20 Watts	20 Watts	60 Watts	110 Watts
CURRENT/ VOLTAGE	5 Amps @ 13.8 Volts	5 Amps @ 13.8 Volts	10-12 Amps @ 13.8 Volts	18-20 Amps @ 13.8 Volts
SIZE	4" X 2" X 4.5"	3.5" X 2" X 7"	8" X 3" X 5.5"	12" X 3" X 5"
WEIGHT	1 lb.	1.25 lbs.	3 lbs.	5 lbs.



	C-1012-G	C-2512-G	C-5012-G
	10W In - 120W Out	25W In - 120W Out	50W In - 120W Out
FEATURES	1 Watt in will give 15 Watts out		
SPECIFICATIONS:			
RF POWER IN	300mW to 15 Watts	300mW to 40 Watts	35W to 55 Watts
RF POWER OUT	120 Watts	120 Watts	120 Watts
CURRENT/ VOLTAGE	18-20 Amps @ 13.8 Volts	16-18 Amps nom. @ 13.8 Volts	16-18 Amps nom. @ 13.8 Volts
SIZE	12" X 3" X 5.5"	12" X 3" X 5.5"	12" X 3" X 5.5"
WEIGHT	5 lbs.	5 lbs.	5 lbs.

	C-1022-G	C-2522-G	C-5022-G
	10W In - 220W Out	25W In - 220W Out	50W In - 220W Out
SPECIFICATIONS:			
RF POWER IN	1W to 10 Watts	1W to 30 Watts	35W to 55 Watts
RF POWER OUT	220 Watts	220 Watts with 30 Watt Drive	220 Watts
CURRENT/ VOLTAGE	48 Amps @ 13.8 Volts	48 Amps nom. @ 13.8 Volts	48 Amps @13.8 Volts
SIZE	13" X 10" X 5"	13" X 10" X 5"	12" X 3" X 5.5"
WEIGHT	13 lbs.	13 lbs.	5 lbs.

MIRAGE 70cm Amplifiers • 420-450MHz - UHF

ALL UHF MODELS FEATURE...

- All-Mode FM, SSB, CW, ATV
- Voltage 13.8 vDC
- Adjustable Delay for SSB
- Remote Control Outlet
- 50 Ω Impedance (input & output)
- Use with **MIRAGE/klm**'s 440 Antennas... Model numbers 440-6X, 440-10X and 440-16X

	D-15-N	D-26-N	D-1010N	D-3010-N
	1W In - 15W Out	2W In - 60W Out	10W In-100W Out	30W In-100W Out
FEATURES	Special for ATV Service as well as SSB and FM All Solid State -No Relays No Remote Outlet Excellent for H/T's	Special for ATV Service as well as SSB and FM 1 Watt in will Give 51W out Excellent for H/T's	430 - 450 MHz SSB/FM Can be modified for ATV Service	430 - 450 MHz SSB/FM
SPECIFICATIONS:				
RF POWER IN	250mW to 2 Watts	400mW to 5 Watts	300mW to 15 Watts	5W-45 Watts
RF POWER OUT	2W In 20W Out	2W In 60W Out	100W	100W
CURRENT	3 Amps nominal	12 Amps nominal	20 Amps	20 Amps
SIZE	7.25" X 3.5" X 2"	8.25" X 2.5" X 7"	12" x 3" x 5.5"	12" x 3" x 5.5"
WEIGHT	1.5 lbs	4 lbs.	6 lbs.	6 lbs.

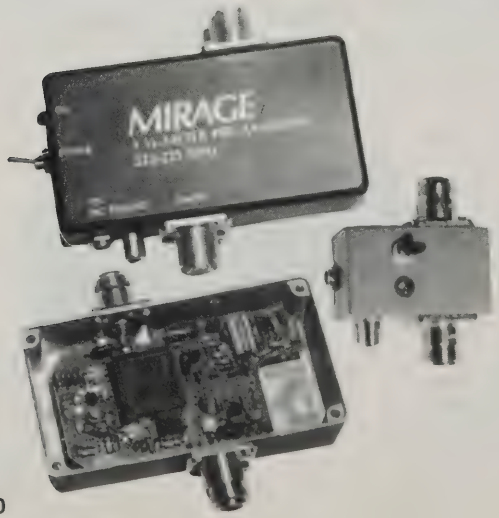
	D-1010-ATVN	D-100-ATVN
	10W In-100W Out	2W In-52W Out
FEATURES	Specially designed for amateur television Can also be used for SSB and FM 2W in will give you 52W output 420 - 450 MHz	Specifically designed for amateur television Can also be used for SSB and FM 420 - 450 MHz
SPECIFICATIONS:		
RF POWER IN	1W to 15 Watts	500mW to 5 Watts
RF POWER OUT	100W	52W
CURRENT	20 Amps	20 Amps
SIZE	12" x 2" x 5.5"	12" x 3" x 5.5"
WEIGHT	6 lbs.	6 lbs.

MIRAGE High Power Amplifiers

MIRAGES's **600 Watt Output**, 2-Meter Amplifiers are available in Input powers of 10W, 25W or 50W,... all with MIRAGES's special features including GaAS-FET Receive-Amp, intermittent duty cycle with internal over temperature protection, all mode operation (SSB, CW or FM), pre-amp gain over 20 dB, overcurrent shutdown, etc.

Model#	Input	Output	Current	Voltage
B-1060G	10W	600W	52 Amps	27.6 VDC*
B-2560G	25W	600W	52 Amps	27.6 VDC
B-5060G	50W	600W	52 Amps	27.6 VDC

*These amplifiers utilize 27.6 Volt mosfet devices. From the instructions supplied by MIRAGE, you can easily couple two heavy-duty 13.8 volt supplies together to provide the required operating voltage.



MIRAGE HF/VHF/UHF PreamplifierS

Model KP-1 • In-Shack model, available for 10M, 6M, 2M, 1-1/4M and 70cm. Features an in-line design with automatic RF sensed transmit/receive switching. The Low Noise (0.68dB) GaAs-FET circuit boosts weak receive signals up to 20-25dB or 10-15dB with internal attenuator switched in. Maximum thru power: 165W Requires 12–15VDC. 4-1/4 " x 2-1/2" x 1-3/16".

Model KP-2 • Mast-Mounted model, similar to KP-1, except installed on a 4-1/2" x 5" mounting plate and supplied with a 2-1/16" mast clamp; also has weatherproof type-N connectors. Mounts outside near the antenna for maximum signal input and lowest line loss. DC insertion module provides power and remote control directly thru the transmission line.

MIRAGE Amplifier Remote Control Head

Model RC-1 • Usable with most MIRAGE RF Power Amplifiers. Provides convenient remote control operation of: Power On/Off, Preamp On/Off, SSB/FM mode switch. Supplied with 18 ft. control cable; longer lengths available on special order. 1-3/4 " x 3-1/4 " x 2-1/2".

MIRAGE Repeater Amplifiers • VHF/UHF

ALL TRANSISTORS ARE MOUNTED ON A COPPER BASE IMBEDDED INTO THE HEATSINK. THIS UNIT IS DESIGNED FOR CONTINUOUS DUTY.

FEATURES
50, 144 AND 220 MHz Models

Cool Running — A 10" high by 19" wide full finned rack-mounted heatsink keeps the transistor temperatures low for long life. The chassis cover is perforated so air convection will keep the circuit board area cool.

Dual Protection — The amplifiers have two temperature sensors; one on the heatsink and one on the circuit board. If conditions cause either area to overheat, the amplifier will shut off until it cools down to a safe temperature.

Bypass Mode — These models will feed the exciter output straight through to the antenna in an over-temperature condition. The bypass mode can also be remotely selected by proper interfacing to the repeater controller. Either a relay contact or a TTL logic can be used to select the bypass mode or amplified mode of operation.

Reduced Relay Wear — The amps have a selectable long release time (adjustable up to 5 secs.) for the RF change-over relay. This prevents unnecessary relay action during repeater operation.

On-Site Control — The bypass mode and relay release time can be selected with built-in switches. The optional MIRAGE RC-1 remote control box can be used to switch these functions up to 18 feet away from the amplifier.

SPECIFICATIONS

MHz Freq. Range	Model Number	Watts Power Input for Watts Max. Cont Output	Amps Nominal Current	Power Supply (vDC)	RF Connector
50-54	A1015R	3-4 for 110	16-18	13.8	Teflon SO-239
144-148	B215R	1 for 110	16-18	13.8	Teflon SO-239
145-148	B1016R	3-4 for 120	16-18	13.8	Teflon SO-239
145-148	B2516R	10-12 for 120	14-15	13.8	Teflon SO-239
223-225	C211R	.3 - .6 for 80	15-16	13.8	Teflon SO-239
223-225	C1012R	5 for 90	16-18	13.8	Teflon SO-239
223-225	C2512R	13-15 for 90	13-14	13.8	Teflon SO-239
440-450	D1010RN	2-4 for 80	14-15	13.8	Teflon "N" UG58AU
440-450	D3010RN	10-12 for 80	11-13	13.8	Teflon "N" UG58AU
420-450 ATV	D100-ATVRN	.5-1 for 40	12-14	13.8	Teflon "N" UG58AU
420-450 ATV	D1010-ATVRN	2-4 for 80	15-16	13.8	Teflon "N" UG58AU

FEATURES
440 MHz and ATV Models

Cool Running — A 10" high by 19" wide full finned rack-mounted heatsink keeps the transistor temperatures low for long life. The chassis cover is perforated so air convection will keep the circuit board area cool. The RF board is low-loss Teflon for minimum dielectric heating.

Reliable — The RF change-over relay has been eliminated on this model to provide the highest order of reliability. Teflon connectors are standard on this well-designed unit.

Protection —The amplifier will shut off if conditions cause the heatsink temperature to raise to an unsafe level.

All-Mode Operation — Class AB linear operation is rated for FM, SSB, CW and ATV operation.

WARRANTY ON ALL REPEATER AMPLIFIERS

Warranty — RF power devices are guaranteed for one year against failure due to defective workmanship or materials. All other components are guaranteed for two years.

MIRAGE Watt/SWR Meters • HF/VHF/UHF

FEATURES:

- Peak or Average Reading
- Reads SWR Directly-Without Extra Charts or Graphs
- Functions: Power Forward/Reverse, Peak/Average and SWR

WARRANTY:
5 Years Parts & Labor

SPECIFICATIONS:

MODEL	MHz FREQ.	SWR SENS.	POWER RANGE
MP-1	1.8 to 30	1-2 Watts	25,200 & 2000 Watts
MP-2	50 to 200	1-2 Watts	50,500 & 1500 Watts
MP-3	420 to 450	5 Watts	5.50 & 150 Watts
MP-4	1260 to 1300	1 Watt	1.10 & 100 Watts

- Remote Coupler Mounting
- Line impedance - 50 Ω
- Insertion Loss-negligible
- Low Battery Indicator
- Triplett Meter Movement
- Weight - 3.5 lbs.
- Power requirements 9-13.6 vDC internal battery or AC adaptor jack

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5 YEARS *all parts*
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With the new, high sensitivity, ultra-fast, Auto Trigger & Hold *STARTEK* frequency counters. Increase readability distance with the new Band Pass Filters.

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is the most significant improvement ever made to the pocket sized counters! It allows "Hands Free" operation to automatically *read & hold* a signal as quick as 8% of a second.

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(priced separately)

HP-400
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1-1500 MHZ

ATH-30
1-2800 MHZ
One-Shot Feature

ATH-50
5 Hz to 2800 MHZ
One-Shot Feature

Signal Strength Bar Graph

Low Battery Indicator

Size 4"h x 3.5"w x 1"d Aluminum Cabinets (No Self Tap Screws)

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ATH™ SERIES FEATURES:
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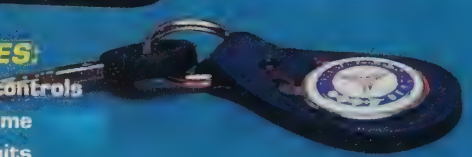
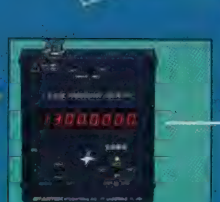
- Ultra fast response time
- Extra BRIGHT LED digits
- AC or battery operation
- Automatic clean dropout
- Maximized sensitivity
- Signal strength Bar Graph
- 9-12V auto-polarity power jack
- *StarCab™* aluminum cabinet



Ni-Cads and A/C Charger INCLUDED with ALL Models



ATH™ Ultra High Sensitivity Frequency Counters			List P
ATH-10	1-1200MHZ HS (no bar graph)	Call	$47
ATH-15	1-1500 MHZ, High speed	Call	$2
ATH-30	1-2800 MHZ, High speed, one shot	Call	
ATH-50	5 Hz to 2800 MHZ, one shot	Call	3
HST-15	Optional 0.2 PPM TCXO High Accuracy Timebase (installed)	Call	1

Economy Frequency Counter		
1350	1-1300 MHZ, 10 HZ Res. 8 gate times, Hold switch	Call

Additional models available. Call or see Price List.

Band Pass Filters
Increase range or distance from a transmitter with a Band Pass Filter. <1 dB pass band insertion loss.

LP-60	DC-60 MHZ Usage	Call
HP-400	400-1500 MHZ Usage	Call
HP-800	800-2000 MHZ Usage	Call

Accessories

A	CC-90	Case for all models	Call
B	TA-90	Telescopic BNC antenna	Call
C	TA-90-L	Telescopic elbow antenna	Call
D	RD-150	150 MHZ rubber duck	Call
E	RD-2750	27-50 MHZ rubber duck	Call
F	RD-800	800 MHZ rubber duck	Call
G	M-207-IC	Interface cable for MFJ-207	Call
H	P-110	200 MHZ, 1x, 10x probe	Call
J	LP-22	Lo Pass, audio usage probe	Call
K	DC-10	Direct, 50 OHM probe	Call

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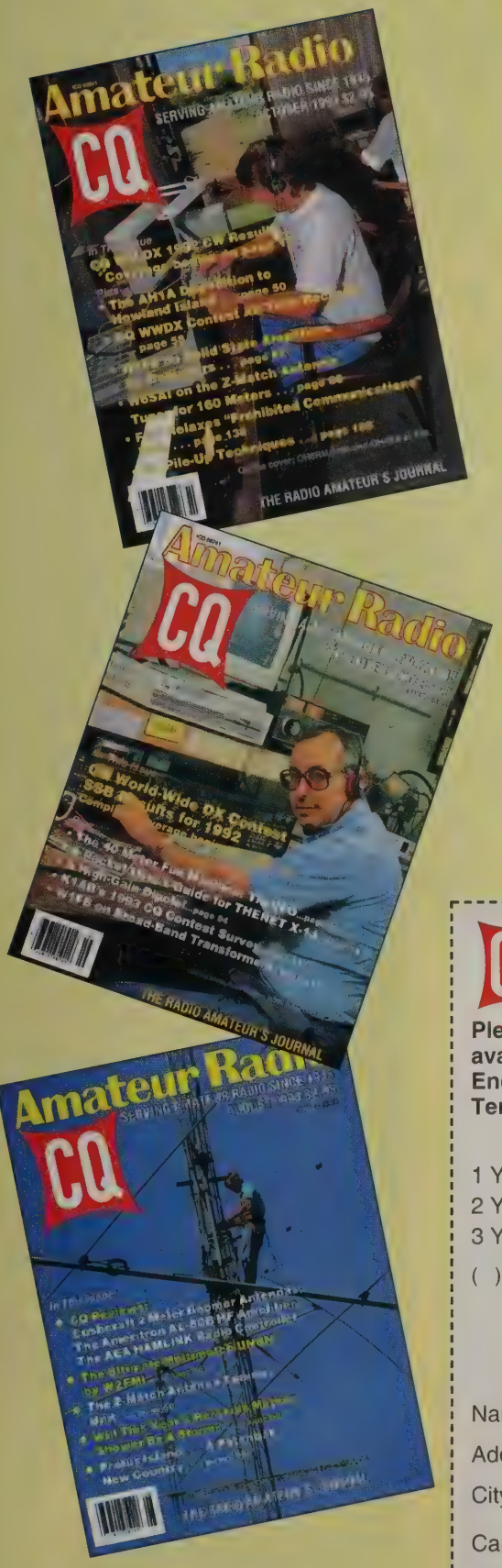

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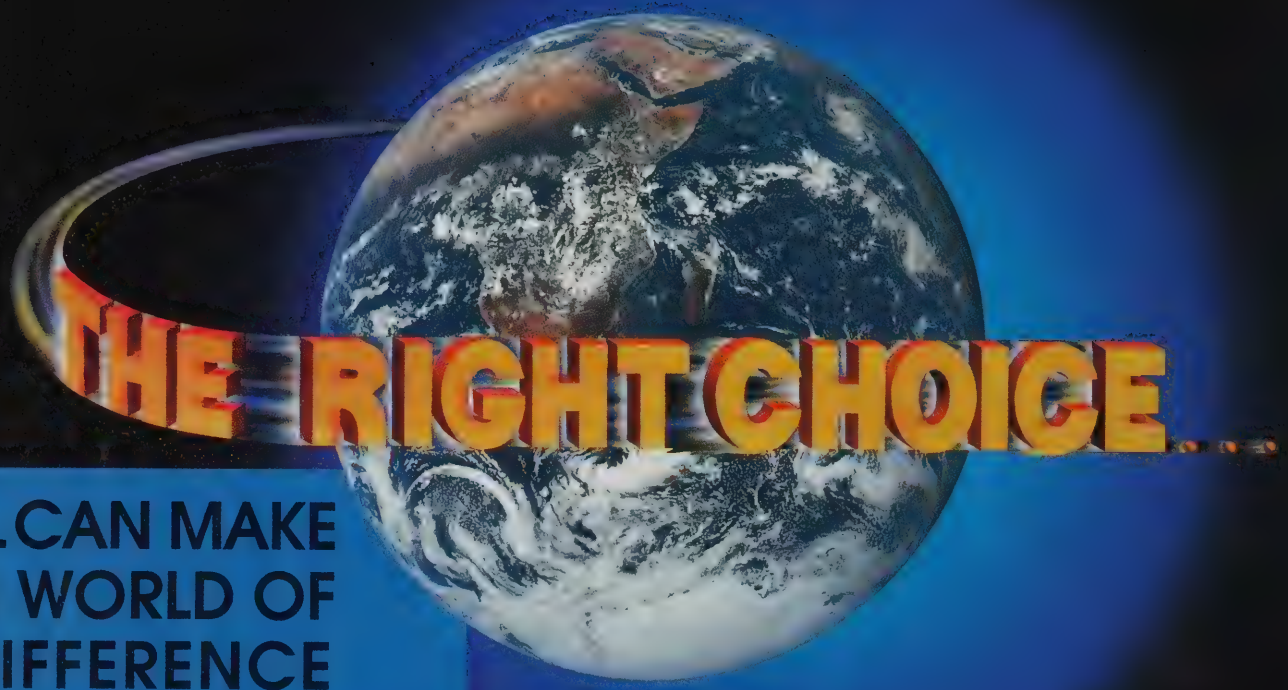

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IT-1 IsoTuner

State-of-the-art automatic antenna tuner for the **IsoLoop 10-30**. Replaces the manual controller to provide quick automatic tuning to any frequency, from 10–30MHz. Manual tuning, if desired, via thumb-wheel. 12-button keypad with audi-e beep; also announces completion of tuning and any error onditions. Eight frequency memories. 10-segment LED bar onitors the tuning process and indicates the frequency and splays any error codes. Memory back-up. Serial computer terface with PC utility software included. 12V DC, AC dapter included. 4⅛"h x 6⅜"d x 5⅛"w, 4 lb, 4 oz...... **$259.95**

IsoPole Omni-Directional VHF & UHF Base Station Antennas

For 144, 220 and 440 MHz. All IsoPole antennas yield the maximum gain attainable for their respective lengths and a zero degree radiation angle which puts most of the signal on the horizon. Exceptional decoupling results in simple tuning and a significant reduction in TVI potential. Broad frequency range - typical SWR is 1.4 to 1 or better across the entire band.

Model	IsoPole 144	IsoPole 220	IsoPole 440
Frequency:	135-160MHz	210-220MHz	415-465MHz
2:1 Bandwidth:	10 MHz	15 MHz	22 MHz
Power Rating:	1 KW	1 KW	1 KW
Length:	125.5"	79.25"	46"
Wind Area:	< 1ft²	< 0.75 ft²	< 0.2 ft²
Connector:	SO-239	SO-239	Type N
PRICE	$59.00	$59.00	$89.00

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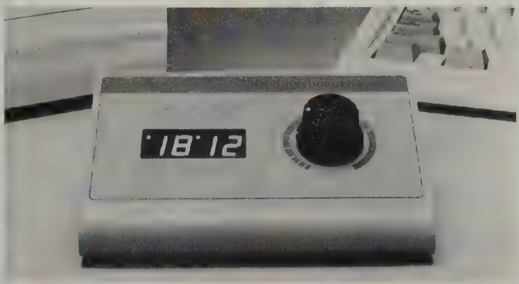
EA Hot Rods • High performance 1/2-wave telescoping tennas for handhelds providing maximum gain and extend- range. No ground plane required for efficient operation so ey actually outperform the longer 5/8's. They are 20% short- and lighter which is more convenient, and places less ess on your HT. In the collapsed position, Hot Rods will per-m like a helical quarter-wave. Handles over 25W, making em useful for portable base or mobile. BNC connector

Model HR-1 for 2 meters • **HR-2** for 220MHz **each $24.00**

SWR-121 HF & VHF/UHF Graphic Antenna Analysts

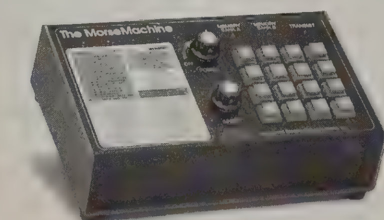
Compact and battery powered units that measure, compute, and present a graphical display curve of SWR versus frequency on a high resolution LCD display. Shows antenna performance over it's operating spectrum, gives SWR and return loss at the center frequency. HF version covers 1–32MHz; VHF/UHF version covers 120–175MHz, 200–225MHz, and 400–475MHz. Both have an SWR range up to 65:1. All functions, frequency, and display width adjustments are controlled via the front panel keypad. RS-232 interface for IBM PC-compatible computer for remote control, remote display, and saving plots (opt. PC software required). Power: 8 AA alkalines (included) or 12-16VDC. 8"h x 4¼"w x 2¼"d, 1 lb, 10 oz.

SWR-121 $349.95 • SWR-121 VHF/UHF $399.95



KK-1 Keyboard Keyer for PC

The KK-1 turns any standard AT-compatible keyboard into a feature packed Morse machine. Includes a cable for sharing the keyboard with your computer. Short-term memory, message repeat, and nestable message buffers make the KK-1 versatile and easy to use. Total message capacity: 7,913 characters. Code practice mode allows you to choose between words commonly heard on the air and random groups of selectable length and difficulty. Speed is selectable from the keyboard or the front-panel knob. Also features a built-in iambic keyer and Farnsworth code practice **$189.95**



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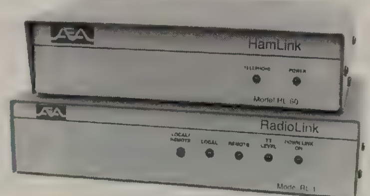

RL-60 RadioLink • Control your HF rig with your Handheld Radio. Easy plug-in interface to link your radio and a base station. Change bands, frequency, and mode from any handheld or mobile radio that has Touch Tone. Works with ICOM, KENWOOD, and YAESU radios with a computer port. **$299.95**

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OP-80 OpLink Telephone Interface • An accessory for HamLink which allows user to connect a headset or headset/boom microphone to avoid using telephone for on-air use; also accepts CW key or keyer for fast CW............ **$119.95**

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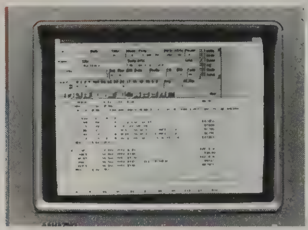

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Log Windows is a fully integrated, easy-to use Windows program. It combines the functions of logging, rig control, and DX cluster monitors with award tracking and reporting. Supports ICOM, KENWOOD, and newer YAESU radios. Import data from major logging programs. Incorporates comprehensive database for storage of QSO information. Interfaces to SAM and Buckmaster on-line callbooks for automatic display of name and QTH when call sign is entered. Award types: DXCC mixed, phone, CW, FSK, bands; CQ mixed, SSB, CW, FSK, bands; WAS mixed, SSB, CW, FSK, and bands. **$99.00**

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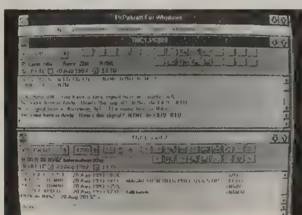
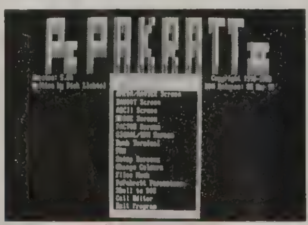


PC Pakratt for Windows

The only data controller program for Windows on the market today. Works with the entire family of AEA data controllers. Supports AEA's dual port controllers. Run two AEA data controllers simultaneously, minimized or from the background. Clipboard cut and paste. Multi-tasking. Separate windows for mailbox operation and QSO logging. Perform binary file transfers with just the click of a button. Full control of screen colors and screen and printer fonts. Includes PK-FAX, B&W fax display program. Requires Windows 3.1.............. **$129.00**



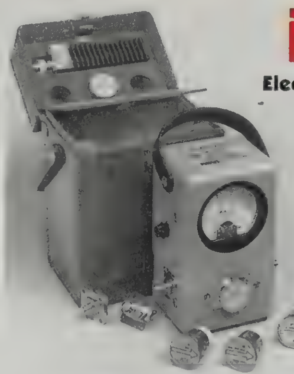
PC Pakratt II

Split-screen terminal program for operation on all digital and WEFAX modes. Works with IBM-compatibles and all AEA data controllers. On-screen help menus; Full QSO logging features; DOS gateway. Supports PACTOR. PK-FAX black and white fax display program. DOS 3.0 or higher is required.............**$64.95**

COM Pakratt with FAX

Split terminal program for PK-232MBX and Commodore C64/128 operation. Includes COM Packratt and COM FAX programs on ROM cartridge, and RS-232 to TTL interface ..**$74.95**

MacRatt with FAX • Software; Apple MacIntosh ..**$64.95**



BIRD

Electronic Corporation

Carrying case, dummy load, elements and connectors are optional.

Case will hold three additional elements (6) instead of dummy load as shown.

BIRD 43 THRULINE® Directional Wattmeter • Measures incident and reflected power in 50Ω coaxial transmission lines with ±5% of full scale accuracy, insertion VSWR is less than 1.05. Comprised of a line section and a direct-reading meter with expanded scales of 25, 50 and 100 unit calibrations, in a rugged corrosion-resistant aluminum case. Supplied with UHF female (SO-239) Quick Change (QC) type connectors–optional UHF, N and BNC types available. Optional plug-in elements (below) provide a wide choice of frequency ranges from 2–1000MHz with power levels up to 5000W, 2–30MHz and up to 1000W, 30–1000MHz. Select one or more elements now, add others as needed. 6⅞"h x 5⅛"w x 3⅝"d, 3 lbs **$230.00**

Model 43P Peak Reading Meter • Same versatile functions as the BIRD 43, but includes switch selectable Peak Reading (PEP) capability. Uses the same plug-in elements, QC connectors and accessories Requires two 9V batteries......... **$345.00**

Model 4300-400 Peak-Reading Modification Kit • Upgrades your your existing BIRD 43 to add PEP like the 43P. **$115.00**

Model 4431 • Same functions as the BIRD 43, with the addition of a built-in variable RF signal sampler that provides an adjustable low level RF signal sample for use with counters, oscilloscopes, spectrum analyzers, etc....................... **$405.00**

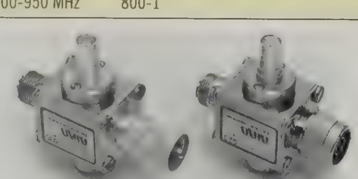
TABLE 1 Standard Elements

Frequency Bands (MHz)

Power Range	2-30	25-60	50-125	100-250	200-500	400-1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

TABLE 2 Low-Power Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
60-80 MHz	060-1	60-80 MHz	060-2
80-95 MHz	080-1	80-95 MHz	080-2
95-125 MHz	095-1	95-125 MHz	095-2
110-160 MHz	110-1	150-250 MHz	150-2
150-250 MHz	150-1	200-300 MHz	200-2
200-300 MHz	200-1	250-450 MHz	250-2
275-450 MHz	275-1	400-850 MHz	400-2
425-850 MHz	425-1	800-950 MHz	800-2
800-950 MHz	800-1		



BIRD Variable RF Signal Samplers • Stand alone wide-range, THRULINE® RF coupling probes for spectrum analysis, RF signal observation on a scope, or frequency counting and control. **Model 4273** 1.5–35MHz, 5KW • **Model 4275** 20–1000MHz, 1KW. **Model 4273-100** and **4275-100** fasten directly to QC equipped BIRD products.

See BIRD in Price List for Carrying cases, QC connectors and Element pricing.

Order Toll Free – Use your Credit Card

MIRAGE SWR/Power meters

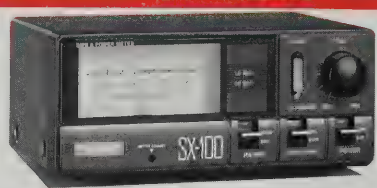
HF • VHF • UHF Wattmeters

- Power Forward/Reverse, Peak/Average and SWR
- Reads SWR direct without charts or graphs
- Remotable coupler
- High quality meter
- Easy to use
- 5-year Warranty

Line impedance –50Ω coaxial, SO-239 connectors
Power – 9 to 13.6V DC internal battery or AC adapter jack
Size and Weight – 5¾" x 4½" x 5¾", 3½ lbs

Model, Frequency and Power Ranges:
MP-1 • 1.8 –30 MHz; 25, 200, 2000W **$189.95**
MP-2 • 50 –200MHz; 50, 500, 1500W.......................... **189.95**
MP-3 • 425-450MHz; 5, 50, 500W................................ **229.95**
MP-4 • 1260–1300MHz; 1, 10, 100W........................... **239.95**

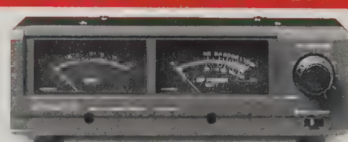
DIAMOND SWR/Power meters



SX-Series • Measures Forward and Reflected average (CW) and SSB (PEP) RF power, and SWR. Accuracy is ±5 –10% of full scale depending on frequency/power. Illuminated meter, sensor switch and LED indicator. Power ratings listed below are for intermittent operation. For continuous mode (CW, FM, etc.) ratings vary with frequency. All have SO-239 connectors, except SX-1000 which has Type-N. SX-600 & SX-1000 are dual band. 12V DC for displays. 6"w x 2½"h x 4"d, 2 lbs.

Model	Power	Range	Display	Price
SX-100	3KW	1.6-60MHz	30W/300W/3KW	$149.95
SX-200	200W	1.8-200MHz	5W/20W/200W	119.95
SX-400	200W	140-525MHz	5W/20W/200W	139.95
SX-600	200W	1.0-160MHz + 140-525MHz	5W/20W/200W	229.95
SX-1000	200W	1.8-160MHz + 430-1300MHz	5W/20W/200W	259.95

KENWOOD SWR/Power meter



KENWOOD SW-2100 SWR/Power Meter • Covers 1.8–30MHz, displays RF power up to 2000W and VSWR. Ranges: 0-200W and 0-2000W, 10% of full scale reading accuracy. Requires 30W RF for SWR measurement. 52Ω, SO-239 connectors. 8"w x 2⅝ "h x 3⅜ "d, 1.9 lbs............. **$159.95**

YAESU SWR/Power meters

YAESU YS-60 SWR/Power Meter • Monitors both average (CW) and peak (SSB) transmitter power output, and VSWR of antenna system. Covers 1.6-60MHz and measures up to 2KW with meter ranges of 20/200/2000W. SO-239 connectors. Requires external 12V DC for meter lamps and internal op amp circuits. 4¾"w x 2¾ "h x 3½"d, 24 oz.................. **$124.95**

YAESU YS-500 SWR/Power Meter • Similar to YS-60 but covers 140 to 525MHz and measures up to 200W with meter ranges of 4/20/200W.– does not require 12V DC........**$106.00**

COMET SWR/Power meters

COMET CMX-Series Cross-Needle Meters • Three models, ideal for use with remote head mobile rigs. Features a separate meter and RF sensor with 6 ft. cable (up to 16 ft. with optional 10 ft. extension). which allows for convenient placement of meter. Lighted, colored Cross-Needle meter shows Forward/Reflected power, and VSWR simultaneously! Three selectable power ranges, plus shows DC voltage from power source. 50Ω, 12VDC. 4¾"w x 3⅛"h x 1¾"d, 1lb, 4 oz.

Model, Frequency Coverage and Power Ranges
CMX-1 • 1.8–60MHz; 30, 300, 2000W ranges........**$189.95**
CMX-2 • 1.8–200MHz; 20, 50, 200W ranges **179.95**
CMX-3 • 140–525MHz; 20, 50, 200W ranges **169.95**

VANCO

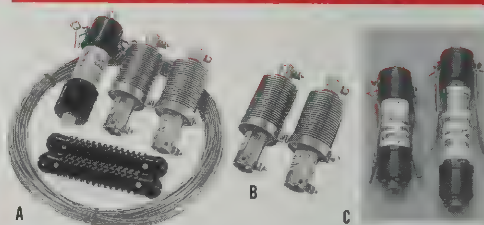
Low Cost SWR Meters

Model SWR-1 • Combination Field strength and SWR meter for 3.5 to 150MHz.; 52Ω. 6"h x 2"w x 2⅞"d, 14 oz. **$19.95**

Model SWR-2 • Combination Power, SWR and Field Strength Meter for 1.7-150MHz; 52Ω. 0-10W and 0-100W ranges. Accuracy: SWR ±5%; Power ±10%. 6"h x 2"w x 2"d, 14 oz **$29.95**

Model SWR-3 • Economy SWR meter for the 1.7 to 30MHz range. Impedance.: 52Ω; Sensitivity: 200uA; SO-239 connectors; Accuracy: ±5%. Mini size – 2½" x 3½" x 3"........... **$14.95**

UNADILLA (W2AU)



W2AU/W2VS 5-Band Antenna Kit (A)

Low SWR on 80 and 40 meters, resonant on 10, 15 and 20 meters. Includes 40 meter traps, W2AU 1:1 balun, end insulators, 120 ft. of #14 stranded copper wire, and assembly instructions. Approx. 110 ft. long, rated 2KW PEP......... **$75.00**

REYCO W2VS Antenna Traps (B)

Add these traps to your dipole for multiband operation on two to six bands. *For example:* add the 40 meter pair (KW-40) and get 40 and 80 meter operation. For 10, 15, 20 ,40, 80 and 160 meters, add all five pairs – 33 combinations!

Selecting Traps:

List the bands you want to cover, listing the highest frequency band first. You will need a pair of traps for each band except the one with the lowest frequency................. **See Price List**

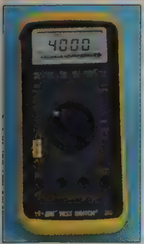
W2AU Ferrite Baluns (C)

Provides a smooth transition from unbalanced coaxial transmission line to balanced antennas – dipoles, quads, yagis. Produces proper current distribution resulting in reduced feedline radiation for maximum power transfer, gain and reduced possibility of TVI and BCI. Replaces center insulator, DC grounded for lighting protection, has convenient center eye hook for support. Usable from 3- 40MHz and rated at 2KW PEP. Available in 1:1 or 4:1 ratios, or beam **$21.00**

W2DU Non -Transformer Choke Baluns

High efficiency , 1:1 ratio. The HF model is the only one available that works on 160 meters!.Handles VSWR up to 5:1 at legal limit, allowing use with antenna tuners. The VHF model eliminates the usual rod and tube hardware balun assembly normally used at those frequencies. **Models:** **HF** (1.8-30MHz), **VHF** (30-250MHz), **HF Beam Balun** (40–10 meters) **$23.00**

BK PRECISION
MAXTEC INTERNATIONAL CORP.



B&K 390 Test Bench™ (left) • A multi-function multimeter. with AC/DC Voltmeter, AC/DC Ammeter, Ohmmeter, Capacitance Meter, 500kHz Frequency Counter and Temperature meter in one package. 0.1% DCV accuracy; Analog bargraph; Auto/manual ranging; 4,000 count LCD display; Relative mode; Min-max average; Memory; Audible continuity; Data hold. 7½" x 3½" x 1½", 17 oz. **$134.95**

B&K 2860 Digital Multimeter (Center) • Rugged construction with water resistant case. AC/DC Voltmeter; AC/DC Ammeter (20A range); Ohmmeter; Audible Continuity Check; Diode Test. 3½ digit, 0.8" LCD readout. 6⅞" x 3 5/16" x 1¼", 12 oz. **$84.95**

B&K 2704A Digital Multimeter (right) • Handy for the tool kit! Measures: DCV 200mV-1000V; ACV 200mv-750V; DCand AC current to 10A; Resistance, 0.1Ω to 20MΩ; Capacitance to 20uF; and Transistor gain (uFE). 5¾" x 3" x 1¼", 13 oz. . **$49.95**

B&K 878 Dual-Display LCR Meter with Statistical Functions Excellent for sorting parts. Simultaneously displays measured value and Q or dissipation factor and remembers minimum and maximum values while keeping a running average of tested component values. *Relative mode* displays difference between the measured and reference component values. *Tolerance mode* "beeps" to indicate measured components outside a 1%, 5% or 10% tolerance around a reference value. Selectable, 120Hz or 1kHz. 1½" x 3½" x 7½", 14 oz. **$229.95**

B&K 815 Parts Tester (center) •Tests transistors, SCRs, diodes, LEDs and batteries under actual load conditions. Capacitance 0.1pF-20mF; Resistance 0.1Ω-20MΩ, 26 ranges. Big 0.8" LCD display. 6⅞" x 3 5/16" x 1¼", 12 oz. . **$96.95**

B&K 3011B 2MHz Function Generator (right) • Generates sine, triangle, square, pulse and ramp waveforms. TTL and CMOS Pulse outputs. 9¼" x 3¼" x 11¼", 6 lbs. **$226.95**

General Purpose Power Supplies

***Lab Quality* – reverse polarity, overload thermal and short circuit protected. Tight regulation, low ripple and conservatively rated for continuous operation at maximum rating.**

Model 1686 High Current (left) • **Output:** 3 to 14VDC @ 2.5 to 12A. Rated for continuous 12A duty at 13.8V DC without overheat. Reverse polarity, overload and short circuit protection. Current limiting. Connect two in parallel to double the current, or two in series to double the voltage. Coarse and fine voltage adjust and current limit. 5½" x 5¾" x 12", 12 lbs.......... **$169.95**

Model 1651 Triple Output (right) • **Output:** Two 0 to 24 VDC @ 0.5A; One fixed 5V @ 4A, continuous. Independent tracking, adjustable current limiting. Short circuit, overload and reverse polarity protection. 3¾" x 9½" x 7½", 11 lbs...... **$359.95**

Scopes and Counters

For design, service or hobby. Scopes ranging from a 20MHz analog dual-trace unit to a versatile digital storage model. Multi-function counters built for continued high accuracy over a wide range of frequencies and conditions.

See the Price List for the complete B&K listing

DIGIMAX Frequency Counters

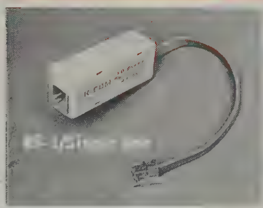
See Digimax in the Price List

DigiMax D-1200/D-612 Frequency Counters (left) • Ideal for solving difficult bench and field problems involving complex PLL, TV Tuner, VTR, and computer circuits. – plus, they can help to keep your QSOs on the correct frequency! Both models meet all FCC land mobile, broadcast, and telecommunications requirements. 9 digit LED, 0.5" seven segment display, leading zero suppression for error-free readings. Built-in 10 MHz, 0.1 PPM (20°-40°C) 10MHz proportional oven. When checking audio frequency tones, the built in audio multiplier in the D-1200 will resolve 1/1000th Hz in 10 sec., 1/100Hz in 1 sec., and 1/10 Hz in 0.1 sec. The. D-612 resolves 1 Hz in 1 sec.and 1/10 Hz in 10 sec. except when using the *optional* AM-12 audio multiplier, then the resolution is the same as the D-1200. The D-1200 also has a prescale input sensitivity control – and the D-612/D-1200 include a 1.2 GHz prescaler. Both operate from external 8-14.5VDC @ 200-500ma., internal 6 "C" cell battery pack, 115V with *optional* AC-12 adapter or *optional* BAC-12 rechargeable battery pack. 3¼" h x 8½"w x 9"d. • D-612 does not include carrying handle.

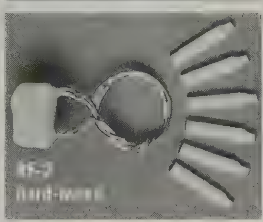
DigiMax D-500/D-510A Frequency Counters (center) • Excellent accuracy and high reliability, make these units the perfect choice for the bench, tool box, or ham shack. The D-500 covers 50Hz to 512MHz and will resolve 1 Hz to 50 MHz and 10 Hz to 500 MHz; the D510A covers 50 Hz to 1 GHz. and will resolve 10 Hz to 1 GHz. 8 digit LED, 0.5" high seven segment display, leading zero suppression for error-free readings. Contains a 1 PPM (17° to 35°C) TXCO time base. Operates from external 8-14.5V DC @100-250ma., 115V with *optional* AC-12 adapter or *optional* BAC-5 rechargeable battery pack. 1½"h x 5"w x 5¼"d.

Optional Accessories • **AC-12** 9V DC Adapter; **AM-12** 10X/100X Audio Multiplier; **AM-500X** 10X/100X Audio Multiplier **B-12** Dry Cell Holder, switch for D-612; **BAC-12** Nicad battery Pack for D-612/D-1200; **BAC-5** Nicad Battery for D-500/D-510; **RF-500X** 250W In-line RF Sampler; **T-1200** 21" BNC Telescopic Antenna

K-COM Telephone RF Interference Filters



Stops telephone RFI caused by 3-30MHz transmitters! . .



Cure phone RFI in the most irritating cases even when dealing with full legal limit power output. Use any number of filters with no adverse effect on telephone performance. Fully assembled, with complete installation instructions.

Model RF-1/Single-line • For single line equipment including wired and cordless telephones, answering and fax machines, modems. RJ-11 modular connectors **$16.95**

Model RF-1/2-line • The correct filter for two-line telephone sets. Standard use or with multi-line electronic key phone systems typically found in businesses.........................**$22.95**

Model RF-1/coiled • Recommended when RFI enters through the coiled telephone cord **$22.95**

Model RF-2 • Hard-wired, provides a wide range of installation options to add RFI rejection at a variety of physical and electrical locations in the system wiring; inside phone jacks, behind wall mounted telephones, etc **$10.95**

We DEAL in Trade-in's...

and are always looking for Clean, Late Model Ham Gear.

Look over the Goodies in this Catalog, then use this Handy Coupon to tell us what you've got and we'll rush you our quote … Pronto!

Looking for good Used Gear? We always have hundreds of items in stock, just let us know what you need . . we may have it!

To: **AMATEUR ELECTRONIC SUPPLY®**
5710 W. Good Hope Road
Milwaukee, WI 53223

I am interested in the following NEW Equipment:

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I have the following to TRADE: ______________________________

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Name ____________________ **Call** __________

Address ______________________________

City/State ____________________ **Zip** __________

MFJ-16010 Random Wire Tuner (top) • Covers 1.8-30 MHz and handles 200W PEP Lets you operate all bands anywhere – apartment, motel, camping, etc. with any transceiver using a random length of wire. Ultra small – 2w" x 3"h x 4"d............ **$39⁹⁵**

MFJ-901B Versa Tuner • Covers 1.8-30 MHz continuously and handles 200W PEP. Matches coax, random wires and balanced lines (built-in 4:1 balun). Very popular for use between a transceiver and a final amplifier for proper matching and full drive, or as a mobile tuner. The *smallest* Versa Tuner – 5"w x 2"h x 6"d **$59⁹⁵**

MFJ-945D Mobile Tuner • Covers 1.8-30 MHz and handles 300W PEP. Extends mobile antenna bandwidth – eliminates having to frequently stop and adjust whip. when making frequency changes. Matches coax only. Built-in cross-needle SWR bridge and wattmeter with 50/300 and 5/30W ranges. 8"w x 2"h x 6"d.............................. **$84⁹⁵**

MFJ-941E Versa Tuner II • Covers 1.8-30 MHz and handles 300W PEP. Matches everything – coax fed dipoles, vees, whips, verticals, beams, random wires and balanced lines (built-in 4:1 balun). Lighted Cross-Needle SWR/Power meter with 300/50W and 30/5W ranges. Eight position antenna switch selects 2 coax lines (direct or thru tuner), random wire/balanced line or external dummy load. 10⅝"w x 2⅞"h x 7"d............. **$99⁹⁵**

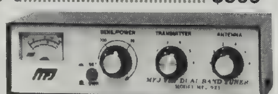
MFJ-948 Deluxe Tuner • Covers 1.8-30 MHz and handles 300W PEP. Has all features of MFJ-941E plus it has a larger lighted peak reading Cross-Needle SWR/Power meter with 300/50W & 30/5W ranges and lamp switch.. **$119⁹⁵**

MFJ-949E Deluxe Versa Tuner II • Same power, tuning and switching capability as MFJ-941E described above. In addition it has a lighted peak reading Cross-Needle SWR/Wattmeter and built-in 300W 50 Ω dummy load. 10⅝"w x 2⅞"h x 7"d. **$134⁹⁵**

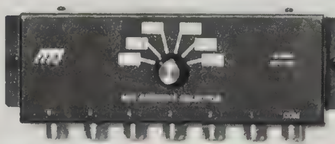
MFJ-962C Versa Tuner III • Covers 1.8-30 MHz and handles 1.5KW PEP. Matches coax, random wire or balanced line (built-in heavy-duty 4:1 balun). Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges. Six position antenna switch for 2 coax lines (direct or thru tuner), random wire and balanced lines. 10¾"w x 4½"h x 15"d **$209⁹⁵**

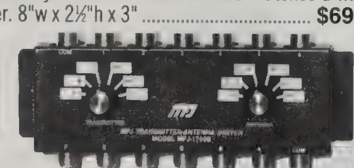
MFJ-986 Differential-T Tuner™ • Covers 1.8-30 MHz, handles 3KW PEP – tunes most antennas. Broadband T-network with roller inductor and differential capacitor. Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/50W and 2000/500W ranges. Roller inductor spinner knob with 3-digit turns counter, 6-position antenna switch and external dummy load switches, 4:1 balun. 10¾"w x 4½ "h x 15"d......**$259⁹⁵**

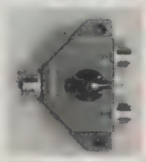
MFJ-989C Versa Tuner V • **Heavy-Duty!** Covers 1.8-30 MHz, handles 3KW PEP, matches everything – coax fed, random wires and balanced lines. Roller inductor with spinner knob and 3-digit turns counter. Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges, 50Ω, 300 watt dummy load, 4:1 balun, 6 position antenna switch, tilt bail. 10¾"w x 4½"h x 15"d.................................... **$309⁹⁵**



MFJ-921 VHF Tuner or **MFJ 924 UHF Tuner** • For base or mobile operation – the 921 covers 2-meters and 220MHz, the 924 covers 440MHz only. Handles 300W PEP and matches a wide range of impedances. Built-in SWR/Wattmeter. 8"w x 2½"h x 3" **$69⁹⁵**







MFJ 931 Artificial Ground (right) • Resonates a random length wire to act as a tuned counterpoise. Improves efficiency and pattern of **random wire antennas.** Eliminates problems caused by an inadequate ground.system. Covers l.8-30MHz, RF ammeter aids tuning. 7½"w x 3½"h x 7"d. Not for coax fed antennas............ **$74⁹⁵**

MFJ-1701 Antenna Switch (left/top) • 6 positions, 50-75Ω. Handles 2KW PEP or 1KW CW, 1.8-30MHz. SO-239 connectors. Unused positions grounded for lightning protection. 10"w x 3"h x 1½"d......................... **$34⁹⁵**

MFJ-1700B Antenna/Transceiver Switch (center) • Select from 1-6 antennas and 1-6 rigs in any combination. Tuner, SWR meter, linear, etc. can be left in line to operate with any combo. 50-75Ω. Handles 2KW PEP or 1KW CW, 1.8-30MHz. SO-239 connectors. Unused positions grounded. 10"w x 3"h x 1½"d **$64⁹⁵**

MFJ-1702B Antenna Switch (left) • 2 positions + center ground, 50Ω. Rated to 500MHz with <0.2dB loss. Handles 2.5KW PEP or 1 KW CW. >60dB isolation @ 300 MHz/>50 dB @ 450 MHz. Unused terminal grounds for lightning protection.....**$21⁹⁵** • **MFJ-1702BN** with Type N connectors, good to 1.1 GHz **$31⁹⁵**

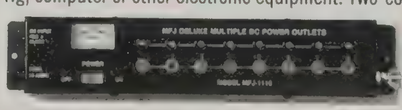
MFJ-1704 Antenna Switch (left/bottom) • 4 position + center ground, 50Ω. Rated to 500MHz with <0.2dB loss. Handles 2.5KW PEP, 1KW CW, >50dB isolation @ 500MHz. Includes a replaceable lightning protection device that reduces lightning induced surges/static....**$59⁹⁵** • **MFJ-1704N** with Type N connectors **$69⁹⁵**

MFJ-250 Versaload (left) • 50Ω oil-filled dummy load. Low VSWR to 400 MHz. Rated 1 KW CW or 2KW PEP for 10-minutes, 1/2 rating for 20-min.; 200W CW, 400W PEP continuous. 7½"h x 6⅝" dia. Includes oil **$49⁹⁵**. • **MFJ-250X** without oil. **$29⁹⁵**

MFJ DRY DUMMY LOADS • Air cooled. Non-inductive 50Ω resistor in a perforated metal housing handles full rated load for 30-seconds. with a de-rating curve up to 5-minutes. **MFJ-260B (HF/VHF)** • 300W, 1-150MHz, 2½"w x 2½"h x 7"d **$29⁹⁵**
MFJ 264 (UHF) • Up to 650MHz, usable to 750MHz. Rated at 1.5KW for 10-seconds., 100W for 10-minutes. 3"w x 3"h x 7"d **$59⁹⁵**

MFJ-704 Low Pass Filter (right) • Reduces TVI caused by harmonics generated by 1.8-30MHz transmitters falling in the TV bands. 52Ω, low insertion loss and high harmonic attenuation. Legal power, SO-239 connectors. 3"w x 3"h x 9"d................. **$39⁹⁵**

MFJ-850 Line Voltage Monitor • Plug into any AC outlet – watch for surge or brown out conditions which could cause damage to rig, computer or other electronic equipment. Two-color expanded 95-135V scale with 2% accuracy. 2¼" x 2¼" x1½" **$19⁹⁵**



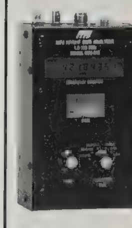
MFJ-1116 Deluxe DC Power Outlet • Connects to a 12V DC and provides 8 HD 5-way binding posts for powering multiple items. Built-in voltmeter, switch and fuse. RF bypassed, outlets spaced for banana jacks. 13½"w x 2¾"h x 2½"d.. **$44⁹⁵** • **MFJ-1112** has 5 posts, no meter or switch **$29⁹⁵**

See Price List and Index for other MFJ models . .

MFJ-209 HF SWR Analyzer (left) • Checks 1.8-170MHz antenna system SWR over an entire band without a transmitter or other equipment. Automatic! – set frequency with vernier tuning and read SWR or tune to find lowest SWR point. Frequency counter may be connected for digital readout. Uses 9V battery or 110V AC with MFJ-1312B adapter. 4" x 2" x 6¾ " **$99⁹⁵**

MFJ-204B Antenna Bridge (Center) • Easily determines if your antenna is too long or too short, measures resonate frequency and resistance to 500Ω. Built-in resistance bridge, null meter, tunable oscillator-driver for 1.8-30MHz. 4" x 2" x 2" Uses 9V battery or 110V AC with MFJ-1312 AC adapter................ **$74⁹⁵**

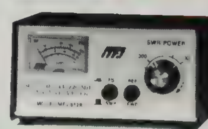
MFJ-1621 Portable Antenna (right) • Covers 40-10M, handles 200W. Operate from apartments, motels, campsites, vacation spots, etc. Consists of a 54" telescoping whip mounted on a self-standing 6" x 3" x 6"cabinet with a built-in antenna tuner, field strength meter and 50 ft. of coax............................ **$74⁹⁵**

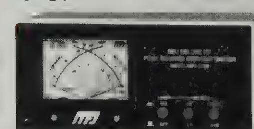


MFJ-249 SWR Analyzer™ • Covers 1.8-170MHz.. Has built-in 10 digit LCD frequency counter and vernier tuning. Automatic! - connect antenna, set analyzer to frequency and read SWR directly. Monitor SWR changes as you make adjustments. Separate BNC input for use as a frequency counter. 1 ppm 10MHz crystal time base; .01, .1, 1 and 10 sec. gate times. Uses 6 AA cells or 110V AC with MFJ-1312B adapter. 4"w x 2½" x 6¾ "........ **$179⁹⁵**

MFJ-259 HF/VHF SWR Analyzer with RF Resistance Meter • All features of the MFJ-249 but also allows measurement of RF feedpoint resistance up to 500Ω at minimum SWR. Take the guesswork out of building matching networks and baluns–watch the effects of spacing on radiation resistance as you adjust your antenna **$199⁹⁵**

MFJ-29 • Carrying pouch for 249/259 .... **19⁹⁵**





MFJ-815B SWR/Wattmeter (right) • Covers 1.8-30MHz, lighted Cross-Needle meter simultaneously monitors peak or average, forward and reflected power and SWR at a glance, without adjustments. Two ranges: 200W/2000W forward 50/500W reflected. 7¼"w x 4½"h x 3½"d. Meter light requires 12V....**$69⁹⁵**

MFJ-817 • Same as MFJ-815B but covers 144 and 440MHz. Power ranges are 200/20W forward and 50/5W reflected .**$74⁹⁵**

MFJ-812B VHF SWR Wattmeter (left) • Covers 2-meters and 220MHz. Reads forward and reflected power on 30 and 300W scales and SWR. Reads SWR from 14MHz thru 220MHz and relative field stength from 1 to 220MHz. 4½"w x 2¼"h x 3"d...**$29⁹⁵**

MFJ-816 HF SWR Wattmeter • Similar to MFJ-812B but covers 1.8-30MHz. Reads forward/reflected power on 30 and 300W scales and SWR (no field strength). 4½"w x 2¼"h x 3"d **$29⁹⁵**

MFJ CW Transceivers

Single band, CW only, five models available • Compact portable, up to 5 watts output. ***Features:*** superhet receiver, speaker, vernier tuning, 8-pole crystal filter, RIT, AGC, semi/full break-in, sidetone. 12-15 VDC. 6"x 6½" x 2½ .... **$154⁹⁵ each**

Models and Coverage

9015 (15M) 21-21.2 MHz	**9030** (30M) 10.1-10.15MHz
9017 (17M) 18.068-18.110MHz	**9040** (40M) 7-7.15MHz
9020 (20M) 14-14.075MHz	*See Price List for Options*

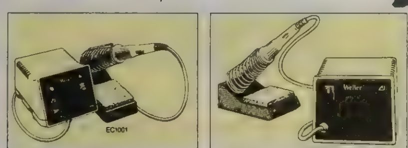
WELLER Model W-60P 60-Watt Pencil-type Soldering Iron (A) Temperature Controlled with tips available for 600°, 700°, or 800°F. Supplied with 1/16" 700°F screw-driver tip. Only 7½" long, 2½ oz. 6 foot cord. 120V AC **$59⁹⁵**

WELLER Model WP-25 25-Watt Pencil-type Soldering Iron (A) For work on delicate electronic circuits. 750°F tip temperature. 7⅞" long, 1¾ oz. 4 ft. cord, 120V AC **$37⁰⁶**

WELLER WSTA3 Pyropen® Butane Soldering Iron (B) Lightweight and completely portable. Operates for up to 3 hours on a charge of cigarette lighter butane. Soldering temperature control adjustable from 392° to 932°F, with fast heat-up time–ready to solder in just 30-seconds. Supplied with tips for soldering, hot air (1202°F), and brazing ... **$74⁹⁵**

WELLER WST2 Pyropen® Jr. (C) • Portable **mini** butane powered soldering iron. Recharges in seconds with regular cigarette lighter butane. Soldering temperature control from 392° to 842°F. Also, hot blow feature (806°F) and torch feature (2372°F). Handy pocket clip **$64⁹⁵**

WELLER 7200PK • Compact, lightweight 75W soldering gun. Handles the trickiest soldering jobs. Flat, self-supporting back acts as a convenient rest. Comes with carrying case, extra tip. and solder. 120V....... **$26⁹⁵**



WELLER WTCPT Controlled Output Soldering Station Three temperature ranges: 600°F, 700°F and 800°F. Lightweight pencil iron is safe for IC soldering. Power unit with unitized on-off rocker switch with indicator light. Storage tray holds extra tip and tip cleaning sponge....................... **$109⁹⁵**

WELLER EC-1002-1 Soldering Station (left) • Compact design. The soldering pencil stand connects to right or left side of unit. Variable temperature diode display, self feeding reservoir.Tray stores extra temperature sensing tips...........................**$189⁹⁵**

SOLDER-IT Silver Bearing Solder Paste • For all electrical soldering–contains 2% silver. Works on ferrous and non-ferrous metals including copper, brass, bronze, nickel, platinum, chrome, monel, stainless, galvanized, gold, silver, coated steel, cast iron, and steel. Especially useful for soldering PL-259 connectors and battery pack connections. **Solder small jobs with the heat of a match! . SLD SP7D $6⁰⁰**

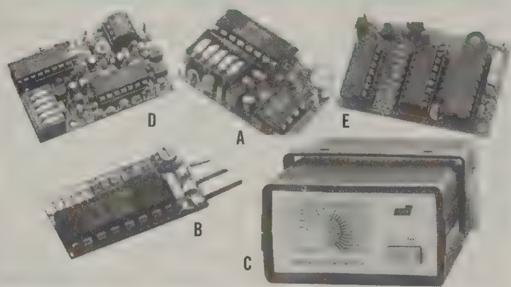
SOLDER-IT Aluminum Solder Paste • For soldering aluminum to aluminum and aluminum to almost any other metals, no flux required, flows at 395°. Great for antenna projects! Especially useful for joining dissimilar gauges of metal and for joining aluminum to copper tubing....... **SLD ALP21D $6⁰⁰**

WAHL 7740 ISO-TIP® Cordless Soldering Iron • Contains a premium battery for high-rate charging, a partially discharged unit will return to full capacity within 1-2 hours; complete recharge in 3– 4½ hours. Tip performance up to 50 watts and over 700° Easily replaceable battery and worklight. Comes with recharging stand, fine and heavy tips.................... **$34⁹⁵**

WAHL 7985 ISO-TIP® B Butane-Powered Soldering Iron • Use as a **soldering iron** with temperature adjustable to 1067°, as a **torch** with temperature adjustable up to to 2372°, or as a 400° **hot blower.** From 100/60/30 minutes per refill. Handy kit pack includes soldering iron with protective igniter cap, torch attachment, medium (2.4mm) tip, fine (1.00mm) tip, wiping sponge/well, and in-use stand/rest and carrying case **$49⁹⁵**

Communications Specialists

TONE ENCODERS & DECODERS



SS-32P (A) • Dip switch programmable encode provides 32 standard or EIA tone frequencies in order between 67 and 250 Hz. Microminiature – easily its inside most portable transceivers. 0.9" x 1.3" x 0.4", 6-25 VDC **$28⁹⁵**

SS-32SMP (B) • A Super small programmable CTCSS encoder for easy installation in most handhelds. Comes standard with 32 EIA tones between 67 and 203 5 Hz. Individual tones are selectable by soldering binary coded jumpers. 0.53" x 1.0" x 0.16", 6-15 VDC **$27⁹⁵**

TE-64 (C) • A multi-purpose encoder providing 64 frequencies which include 32 sub-audible, 19 burst-tone, 8 Touch-Tone and 5 test frequencies. Separate outputs for the high and low frequency ranges. 5¼" x 3.3" x 1.7", 6-30 VDC **$79⁹⁵**

TS-32P (D) • Field programmable CTCSS encoder-decoder. DIP switch programmable. All 32 EIA tones from 67-203.5 Hz are included in std. memory. 1¼" x 2", 0.4", 6-25 VDC **$57⁹⁵**

DTD-1 (E) • A very small high quality, low cost DTMF decoder. Capable of decoding any one of 5,040 four digit codes to provide a latched or momentary open collector output for single function operations. 1¼" x 2" x 0.4", 6-12 VDC............ **$59⁹⁵**

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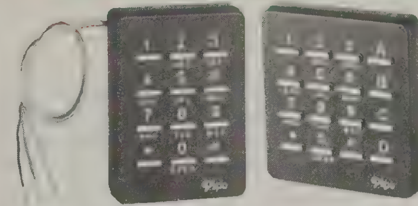
High Quality DTMF Encoders



- 12-digit or 16 digit pads
- Steel Keys
- Sealed Gold Dome Contacts
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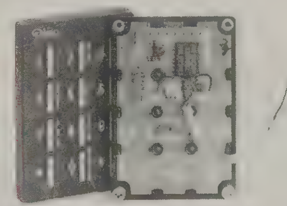
- NO RFI
- Simple 3-wire connection
- Voltage 8.5 to 16V DC
- Temperature -22 to +160 F
- Adjustable level and timing
- Front panel adjustable
- Includes template, hardware and schematic

Small ! . . .

PK-1 • 2.65"h x 2"w x .045"d • **PK-2** • 2.65"h x 2.5"w x 045"d

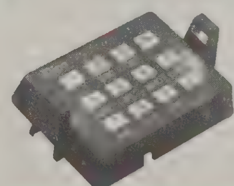
K-Series option features a built-in keying circuit and relay to automatically key a transmitter or other system. When any key is depressed, a relay closes for 0–3 seconds, time is adjustable with a trimpot. **M-Series** option is a special encoder package for mounting any PK-1/1K, PK-2/2K PIPO encoder to surfaces that are inaccessible from the rear such as walls, mobile dashboards, panels, etc. The package consists of a frame which secures to the mounting surface

For Prices see PIPO in the Price List



P-7 and P-8 Series • Features similar to the K-Series but rugged-designed for the demanding Land Mobile Industry. Your choice for radios or systems exposed to harsh or abusive environments. **Smallest!** - features miniature electronic design, low distortion, adjustable audio output.

P-7H • 12 key, horiz. format, 1.50"h x 2.16"w x 0.20"d
P-7V • 12-key, vert. format, 2.16"h x 1.50"w x 0.20"d
P-8V • 16-key, vertical format, 2.16"h x 1.50"w x 0.20"d



PP-5 Series • A 12-key encoder with sounder to confirm that each key has been fully depressed. Illuminated by two minature incandescent bulbs. 2.15"h x 3.3"w x 0.5"d, 9-16 VDC.

Replace those aging finals!…

EIMAC 3-500Z's
$183⁰⁰ each *(U.S. mfg.)*
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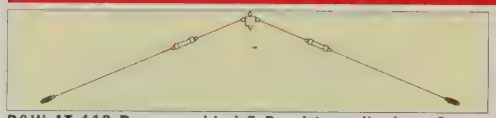
B&W Antennas & Accessories

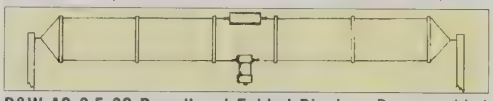


B&W AT-110 Preassembled 5-Band trap dipole • Covers 80–10M coax feed, 110 ft. long, rated 2 KW PEP. Low VSWR on 80 and 40M; somewhat higher on 10 15 and 20M – typically 2:1 to 3:1. Wire length adjustments for tuning **$84.95**

AT-110K • Kit version of AT-110 – #14 stranded copperweld wire, center connector, traps and end insulators..... **$72.95**

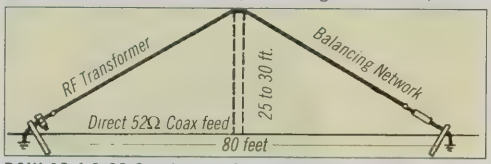
AT-55 Preassembled 4-Band trap dipole • Covers 40–10M, 52Ω coax feed, 55 ft. long, rated at 2KW PEP, ... **$74.95**

AT-55K • Kit version of AT-55 – #14 copperweld wire, center connector, traps and end insulators .....**CLOSEOUT $59.95**



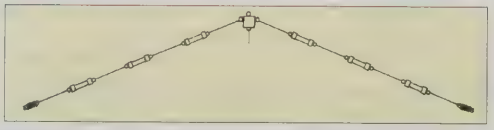
B&W AC 3.5-30 Broadband Folded Dipole • Preassembled and pretuned. Covers 3.5–30MHz continuous with VSWR less than 2:1. 52Ω coax feed, 90 ft long, rated 2KW PEP. Install as a horizontal flattop, an inverted-V, or sloper for DX.... **$179.95**

B&W BWD 1.8-30 • Same as AC 3.5-30 but covers 1.8-30MHz continuous. Rated at 2KW PEP, 90 ft. long..... **$179.95**



B&W AC 1.8-30 Continuous Coverage End-fed "V" • Covers 1.8–30 MHz with VSWR less than 2:1, rated 2KW PEP. Requires 80 ft. of horizontal space, or when limited, can be shorted further with only a slight loss of efficiency..... **$179.95**

B&W Antennas for Limited Space



B&W AS-160 • **160/80/40/20 meter Dipole or V** • At 137 feet. long, is only about half-the-length of a full-sized 160 meter dipole, yet due to its design, it is an efficient radiator. It also gives excellent full-size performance on 80, 40 and 20 metersl. Three sets of traps isolate a half-wave on each band. When using "no-tune-up" transceivers for 160M operation, an antenna tuner is recommended to provide a better match for greater power transfer and bandwidth. Direct feed for 52Ω coax with SO-239 connector. 500 watts PEP **$139.95**

AS-80 • **80/40/20 meter Dipole or Inverted V** • Similar in construction to the AS-160 above, except only two sets of traps. Where installation space is at a premium, this antenna can provide excellent coverage of 80 meters with a shortened overall length of only 78 feet. Operates with low SWR on all three bands. Rated at 500 watts PEP..... **$109.95**

AS-40 • **40/20/25/10 meter Dipole or Inverted V** • Two sets of traps, rated at 500W PEP. Overall length is 40 ft..... **$139.95**

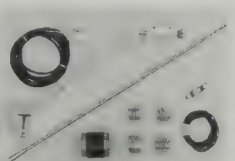
AS-20 • **20/15/10 meter Dipole or Inverted V** • Two sets of traps rated at 500W PEP. Overall length is 23 ft..... **$109.95**

B&W Antennas for Very Limited Space

AXS-160 • **160/30 meter Dipole or Inverted V** • One set of traps, rated at 500W PEP. Overall length is 96 ft **$109.95**

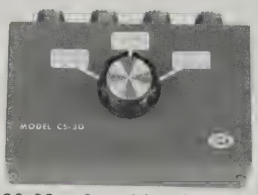
AXS-80 • **80/40/15 meter Dipole or Inverted V** • Two sets of traps, rated at 500W PEP. Overall length is 64 ft..... **$109.95**

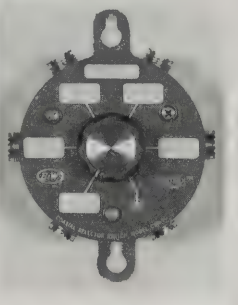
B&W AP-10 Portable antenna
Only 57" fully extended. Convenient for limited space in apartments, travel, etc. Simply change coils for 2, 6, 10, 15, 18, 20, 30, or 40 meters. Handles 300W PEP. Mounting bracket, all coils, 10 ft. of coax and counterpoise wire....**$69.95**



Coaxial Switches, etc.

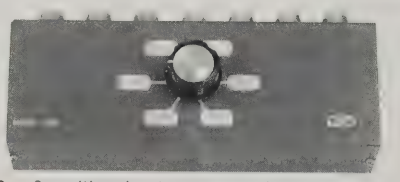
• 52/75Ω • 2KW SSB • Negligible insertion loss • VSWR less than 1.2:1 up to 150 MHz • Crosstalk at 30 MHz -45 dB between adjacent outlets, -60dB between alternate outlets



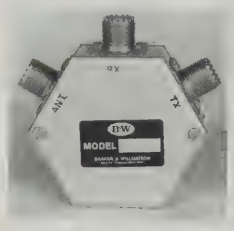


CS-3G • 3 position desk or wall mount. SO-239 connectors, grounding **$39.95**

CSR-5G (right) • 5 position, side SO-239 connectors, wall mount, grounding. **$49.95**



CS-6G • 6-position, locates on operating desk or mounts to wall. SO-239 connectors, grounding for protection **$49.95**



CR-115 Coaxial Relay • for-switching antennas from transmit to receive. Receiver terminal grounds when in transmit. Rated at 1KW CW to 150MHz. Requires 48 to 130V AC for control..**$42.50**

FL-10/1500 Low Pass Filter Eliminates TVI due to HF (1.5-30 MHz) transmitter harmonics. 52Ω, 1000W rating. Sharp cut-off, high attenuation of undesired harmonics with less than 0.3 db insertion loss.....**41.50**

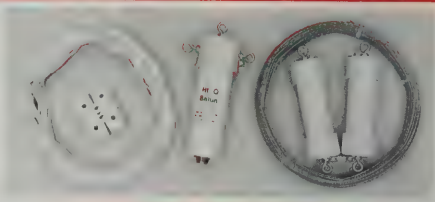
VS-300A Antenna Tuner • Covers 1.8 to 30MHz, rated for 300W RF input. Matches coaxial cable, balanced line or single wire antenna. Built-in antenna switch selects one of two coaxial fed antennas, wire antenna, or bypass. Internal 4:1 balun, and meter with 300W forward and 30W reflected scales **$99.95**

BENCHER

BENCHER ZA-1A 1:1 HF Balun • For 80-10M dipoles, vees, quads and yagis. Transforms 52Ω unbalanced coaxial line to a balanced feed. Reduces feedline radiations, increases efficiency and reduces TVI/BCI. **No ferrite core**, accepts a substantial mismatch at legal power allowing use of an antenna tuner. DC grounded for lightning protection. HWK hardware kit available for mounting to a 2" boom **$34.95**

YA-1 Low Pass Filter • Cure TVI caused by transmitted harmonics. For 1.8–29.7MHz, rated 1.5KW or 5KW peak.>80dB attenuation at 54MHz. 2½"w x 9⅜"l x 2½"h, 2 lbs **$54.95**

Van Gorden Engineering



Van Gorden Dipole Antennas

Complete with Hi-Q balun, #14 stranded copper antenna wire, ceramic insulators, and 100 ft. of nylon support rope. Rated for full legal power– may be used as an inverted Vee.

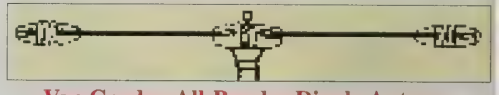
D-80 for 80/75m, 130 ft. **D-15** for 15m, 22 ft long
D-40 for 40/15m, 66 ft long **D-10** for 10m, 16 ft long
D-20 for 20m, 33 ft. long **See Price List**

Shortened dipole model construction is the same but includes appropriate traps as pictured above.

SD-80 for 75/80m, 90 ft. long **SD-40** for 40m, 45 ft. long
See Price List

Van Gorden G5RV Multiband Antenna

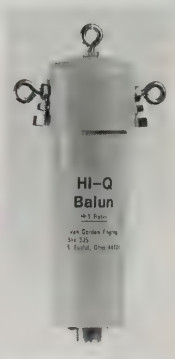
Covers 3.5 to 30MHz, and also 1.8 MHz as a Marconi type antenna with a tuner and good ground. Consists of a 102 ft. flattop with a 31 ft. section of 300Ω KW twinlead, a transformer/coupler and 70 ft. of RG-8X mini-foam coaxial cable with SO-239 connector. Handles 2KW PEP, assembled.. **$50.00**



Van Gorden All-Bander Dipole Antenna

Covers 160-10M with the use of an antenna tuner with balanced output. Full 135 ft. long–or less, if installed as an inverted V or sloper–trim to fit small lots. Assembled with #14gauge copper wire, center and end insulators and 100 ft. of 450Ω balanced line. Rated at 2KW PEP..... **$29.95**

SHORTY All-Bander • As above, but with loading coils to shorten the physical length–70 ft. overall length **$39.95**



Hi-Q Balun $14.95

- 1:1 or 4:1 impedance ratio: For 52Ω unbalanced coaxial cable to 52Ω balanced antennas.
- For dipoles, yagis, inverted vees and doublets.
- Covers 3-40MHz, full legal power
- Replaces center insulator
- Reduces feedline radiation for more power into antenna, and less TVI and BCI problems.
- Built-in DC ground reduces noise and protects against lightning.

Hi-Q Antenna Center Insulator $6.95

- Insulator only, no internal balun
- Replaces egg center insulator
- Small, rugged, lightweight, weatherproof. SO-239 connector and center supporting eye hook.

Van Gorden

450 Ω insulated ladder line **(100 ft. roll)**.....**$ 12.00**
450 Ω insulated ladder line **(1000 ft. roll)** **110.00**
Type-N male connector for Belden 9913 coaxial cable.... **4.95**

Order Toll Free & Use your Credit Card

Large Stocks mean Same Day Shipping!

AMECO

MECO PT-3 Preamplifier • Covers 160 thru 6 meters and seable useable with either a receiver or transceiver. Tunable w noise dual gate FET circuit provides more than 20dB gain ith low noise figure and improved spurious and image rejec-on. RF sensed switch with variable delay automatically ypasses to antenna on transmit. Second receiver and anten-a capability. 12V DC. 2½"h x 8¾"w x 6½"d **$119⁹⁵**

-12T • 12V DC power supply for above **$9⁹⁵**

MECO TPA Tunable Preamp and Active Antenna • A dual unction receiver accessory. May be used with an outside ntenna as a tunable preamplifier with more than 20dB gain nd low noise figure, or as an effective indoor active antenna sing the built-in 30" collapsible whip. Covers 2 to 30 MHz in bands. 9V DC. 2½"h x 8"w x 6½"d **$69⁹⁵**

T-9T • 9V DC power supply for above............................ **$9⁵⁰**

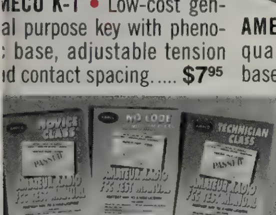
MECO High Pass Filters • Stops TV, FM and VCR interfer-nce caused by harmonics and signal overload from amateur adio transmissions, etc. Easy installation at TV antenna nput terminals or connector. Provides a sharp frequency cut-ff at 52MHz with 70dB attenuation below 50MHz. Models for 5Ω or 300Ω TV antenna lead-ins or 75Ω cable systems. rder **Model HP-300T** (300Ω) or **HP-75T** (75Ω) **$12⁹⁵**

AMECO OCM-2 • Combination Code Practice Oscillator and CW Monitor with volume control, 3" speaker, and headphone terminals. Requires a code key and 9V battery.

Kit $19⁹⁵ • Wired $24⁹⁵

MECO K-1 • Low-cost gen-al purpose key with pheno-: base, adjustable tension d contact spacing..... **$7⁹⁵**

AMECO K-4 • Deluxe high quality key. Polished brass base, and shorting bar **$12⁹⁵**



MECO FCC Test Manuals • New revised editions corporating all the latest changes in FCC amateur radio st preparation requirements. Separate manuals are avail-ble for the Novice, Technician and the New No-Code chnician Classes All current FCC examination questions for ch class, with corresponding multiple choice answers.

MECO Complete Morse Code Course • For IBM PC/XT/AT or 0% compatible. Menu driven, contains over 18 options. nerates random characters, numbers and punctuation at y speed and tone. Generates infinite random QSO's–similar FCC/VEC exams at any speed and tone. Sends text from y external data file, more! **107PC $19⁹⁵**

ore Ameco Publications & Code Courses–See Price List

THE SMILEY ANTENNA CO.

Hand Tuned Antennas for your Hand Held Radios

Each Smiley handheld antenna is individually hand tuned to resonance at band center under normal operating conditions. (No ground plane – No radials). Manufactured from the finest heat-treated copper plated spring steel coils. Cold rubber compound is used for coil insulation and a neoprene heat-shrink coating applied for strength and endurance. All have BNC connectors.

OTHIN STICK • 1/4 wave telescoping **dual band** antenna for 144 and 220MHz bands .... **(TS) $16⁹⁵**

SUPER STICK II (A) • 2 meter, 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain fully extended (54"); usable fully collapsed, or one section 1/4 wave. Length: 54" extended, 10" collapsed .... **(SS-II) $19⁹⁵**

SUPER STICK II COMBO • As above but includes a 2 meter Stubby Duck antenna (D) .... **(SS-II/COMBO) $26⁹⁵**

5/8 SLIM DUCK (B) • 2-meter, 5/8-wave, 7db gain, flexible base loaded antenna. 12" long .... **(5/8 SLD-2) $17⁹⁵**

5/8 SLIM DUCK COMBO • As above, but includes a 2 meter Stubby Duck antenna (D) ....**(5/8 SLD-2 COMBO) $24⁹⁵**

REGULAR DUCK (C) • For 2 meters. Tuned Ducks show a 3db gain over other Rubber Ducks because they are impedance matched for hand-helds. .... **(RD-2) $14⁹⁵**

STUBBY DUCK (D) • Tuned, efficient, for 2M **(RDS-2) $14⁹⁵**

SUPER STICK III • 220MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain fully extended; also usable fully collapsed, or a one section 1/4 wave. Length: 36" extended, 8¾" collapsed .... **(SS-III) $19⁹⁵**

SUPER STICK III/COMBO • As above but includes a 220MHz Stubby Duck antenna (G) .... **(SS-III/COMBO) $26⁹⁵**

5/8 SLIM DUCK (E) • 220MHz, 7db gain, flexible base loaded antenna. Length: 9" .... **(5/8 SLD-220) $17⁹⁵**

5/8 SLIM DUCK COMBO • As above, but includes a 220MHz Stubby Duck (G) .... **(5/8 SLD-220 COMBO) $24⁹⁵**

REGULAR DUCK (F) • Tuned for 220MHz .... **(RD-220) $14⁹⁵**

STUBBY DUCK (G) • Tuned for 220MHz .... **(RDS-220) $14⁹⁵**

SUPER STICK IV (H) • 440MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed. 18" extended, 5¾" collapsed............ **(SS-IV) $19⁹⁵**

SUPER STICK IV COMBO • As above but includes a 440MHz Stubby Duck (K) .... **(SS-IV/COMBO) $26⁹⁵**

SLIMLINE (I) • 440MHz, 1/4λ flexible ant .. **(SL-440) $12⁹⁵**

5/8 SLIM DUCK (J) • 440MHz, 7db gain, flexible base loaded antenna. Length: 5" .... **(5/8 SLD-440) $17⁹⁵**

5/8 SLIM DUCK COMBO • As above, but includes a 440MHz Stubby Duck (K) .... **(5/8 SLD-440 COMBO) $24⁹⁵**

STUBBY DUCK (K) • Tuned for 440MHz .... **(RDS-440) $14⁹⁵**

MINI DUCK (L) • Tuned for 440MHz ...... **(RDMD-440) $14⁹⁵**

FLEX-COIL (M) • 2 meter, 1/2wave, 7-9 dB gain, flexible base 35" fully extended..................**(FLX 1/2 WAV2M) $25⁹⁵**

270A (N) • Telescoping 2m/440 gain antenna. 1/4 wave (2m) 5/8 wave (440 MHz) **$19⁹⁵**

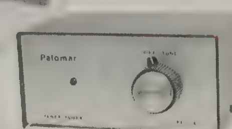
TAQ • 1/4-wave whip, specify 2M, 220 or 440MHz **$10⁹⁵**

A Smiley for your every need!

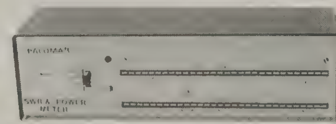
PALOMAR Engineers

More Palomar... see Index

PK-200 Dual Paddle Key for iambic keyers • Precision made by Jones of England and imported by Palomar. Smooth solid iambic action by rotary ball bearings enclosed in machined brass block on steel base. Adjustable spring tension, paddle height and paddle spacing. Gold-plated contacts. Engraved serial number....**$139⁹⁵**



PT-340 Tuner-Tuner (right) • Eliminate tune-up QRM and overheated final tubes and devices by adjusting your station antenna tuner without transmitting. Installs permanently between rig and antenna tuner. Simply it on, and listen to the noise output from the Tuner-Tuner in your receiver. Adjust your station tuner for a dip in the noise (null), that's it! Covers 1.7–30MHz. Requires 9V battery. 6" x 5" x 3" **$99⁹⁵**



M-835 Bargraph SWR & Power Meter • Two 30 element LED displays show PEP or average power and SWR instantaneously and simultaneously, without adjustments–just select the range you need for the rig or amplifier you are using. Covers 1–30MHz with 2, 20, 200 and 2000 watt power ranges. Shows VSWR 1.0 to 10:1+. Requires 12VDC @ 800ma. 9½"w x 2¾"h x 3½"d. 1 lb. **$189⁹⁵**

P-410X/412X Preamplifiers for Transceivers • Covers 160-6M in four ranges. Installs easily in-line between transceiver and antenna. Improves reception with a high-quality preamplifier with adjustable gain up to 20dB. It provides lower noise figure, better selectivity and overload capability. Automatic bypass switching to antenna on transmit. 3"h x 8½"w x 5"d. **Model P-410X** (115V) or **P-412X** (12V)..........**$169⁹⁵**

RX-100 Noise Bridge • Just One measurement tells if your antenna is resonant, and if not, whether it is too long or too short. Shows resistance and reactance values of coax fed antennas from 1–100MHz. Install between receiver and feedline. Tune receiver to frequency and adjust controls for a noise null and interpret the readings according to instructions. Useful for off-the-air tune-up of transmitters and tuners, and to adjust tuned circuit resonance. Uses 9V battery. 5¾" x 3" x 1¼"............ **$79⁹⁵**

SB-4 Balun • Matches 50Ω to 200Ω. For high SWR applications: multi-band dipoles, antenna tuners, open wire line to coax conversions. Covers 1.7–30MHz, rated for 6KW PEP or 2KW CW– usable at full rated power with up to 10:1 SWR. Teflon insulation, epoxy encapsulated, stainless steel eyebolt on top. 4"dia. x 4" high, 2 lb **$79⁹⁵**

AES® – America's Number One, Second to None Amateur Radio Dealer.

A99

10 meter
Base Station Antenna

TWIN RING ADJUST-A-MATCH TUNING

The **A-99** is a half wave over a quarter wave variable mutual inductance tuned antenna for 10–17M.

It's **economical** and **easy to use!** – it features the **Solarcon** Twin Ring "Adjust-A Match" tuning which makes it possible to tune the input to the antenna and obtain the optimum SWR over a wide range of frequencies. Optional Ground Plane Radial Kit makes it perform even better!

Simple! - raising the rings raises the frequency and lowering the rings lowers the resonant frequency.

A real beauty! – rugged three-piece white fiberglas construction with triple plated brass fittings. It's easy it assemble and install.

A-99 Specifications

Height	17 ft. 8 in.
Sections	3
Bands	10–17 meters
Gain	3 dBi
Power Limit	2000 Watts
Radiation Angle	<20 degrees
Grounding	DC Grounded
Mounting	1-1/2" mast max.
Connector	SO-239
PRICE	**$59.95**
GPK-1 Ground Plane Radial Kit	$39.95

SOLARCON ANTENNAS

MFJ Keyers

MFJ-422B Keyer-Paddle Combination

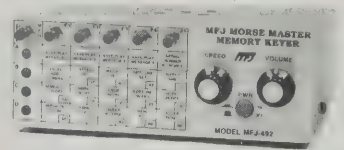
Keyer unit installs on a Bencher Iambic Paddle. If you already own a Bencher paddle, buy *just* the keyer unit – if not, buy the Combo. Speed is 9-50 wpm, has adjustable weight and tone, dot-dash memories, sidetone. Semi-automatic/tune or automatic modes. Keys grid block, cathode or solid state. Requires a 9V battery or AC adapter. 4⅛" x 2⅝" x 5½"d.

MFJ-422B Combo **$124.95** • **MFJ-422BX** Keyer only **$74.95**

MFJ-407C Deluxe Electronic Keyer

Features dot-dash memories, self completing dots and dashes, jam-proof spacing. RF proof, instant start. Single squeeze, or straight key. Front panel controls include speed, weight, tone and volume, ON/OFF, tune, auto/semi automatic. Rear switch selects A or B-type iambic keying. Built-in speaker. Requires 9V battery (not included), or optional MFJ-1312B 110VAC adapter. 7" x 2" x 6"d **$64.95**

MFJ-401B Econo Electronic Keyer II • Similar to MFJ-407B described above, but with external speed and volume controls, internal weight and tune controls. Requires 9V battery (not included) or MFJ-1305 110VAC adapter.......... **$49.95**



NEW! MFJ-492 Menu Driven Memory Keyer

No keypad, no complex sequences to remember– just follow the menu! From the menu you can save and play messages, decrement serial numbers, set speed, weight, sidetone, iambic, semi-auto, handkey, message queue, paddle command modes – turn on/off sidetone, transmitter tune, keying output on/off – select iambic A or B, reverse paddle, Morse trainer and store starting serial number. Commands can also be keyed from the paddle. Holds 192 characters in four soft sectored message memories, and is expandable to over 8K characters in eight memories; lithium battery back-up. Front panel control for speed (5-100 WPM) and volume. Built-in sidetone speaker, direct and grid block keying output. Requires 9V battery or optional MFJ-1312 110VAC adapter. 6½" x 2½" x 6¼" **$89.95**

MFJ-493 • Like MFJ-492 but with 32K characters of memory. Has IBM keyboard input, QSO simulator also included **$129.95**

MFJ-490 • **Memory Keyer/Bencher Combo** • Has all the features of the MFJ-492 except memory expansion **$149.95**

MFJ-490X • **Memory Keyer/Bencher Combo** • MFJ-490 less the Bencher Paddle.......... **$99.95**

MFJ-451 • **Morse Keyboard** • Stand alone CW keyboard. 200 character type ahead buffer and two 100 character message Requires 12VDC or MFJ-1312B 110VAC adapter **$84.95**

MFJ-557 Deluxe Code Practice Oscillator

Features a code oscillator and Morse straight key mounted on a non-skid heavy base. Built-in speaker, adjustable tone and volume controls, earphone jack. Uses 9V battery (not included) or optional AC adapter. 8½" x 2¼" x 3¾".......... **$24.95**

STARTEK Frequency Counters

In Stock... For info see the Index & Price List

BENCHER

See BENCHER in the Price List

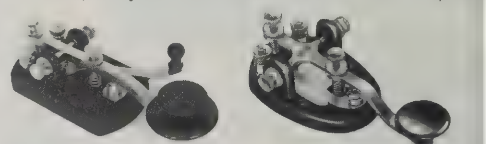
Iambic & Single Lever Paddles • Full range adjustment of tension and contact spacing, self adjusting nylon and steel bearings. Heavy gold plated solid silver contact points and polished lucite paddles. Precision machined chrome plated brass frame and heavy chrome, gold or black painted steel base with non-skid feet.

New! **"RJ" Hand Morse Keys** • Oil impregnated sintered bearings at pivot points and stainless steel adjustment screws used throughout. A complete range of locking adjustments of all movements and tensioning is provided. Available with chrome plated or black painted steel base.

NYE VIKING Keys

NYE VIKING 330-001 Master Key (right) • For the *expert* but perfect for the beginner! Isolated contact assembly keeps keying circuit separate from all parts. Heavy die-cast body, no need to secure to table for stability. Gold plated silver contacts, adjustable action key arm, Navy-type knob, 3 ft. cord with phone plug, black plated finish.......... **$59.95**

NYE VIKING SSK-001 Super Squeeze Key (left) • Use with an electronic keyer for fast comfortable electronic keying action. Gold-plated silver contacts, nickel-plated brass hardware, heavy base with non-skid feet **$49.95**



NYE VIKING Speed-X Code Keys • Six standard models (right), four Heavy Duty models (left) – all with gold-plated heavy silver contacts, adjustable key action and heavy die-cast bases. With and without switches, brass or nickel plated hardware, standard or Navy-type knobs. Optional matching heavy steel base plate with non-skid feet.

See NYE VIKING in the Price List

VIBROPLEX Keys

"The Oldest Name in Amateur Radio"

VIRBOPLEX Original "Bug" • Press the thumb piece to the right and the vibrating bar produces one, or a string of dots – automatically. Dashes are made to the left, manually. A sliding weight adjusts the speed for 20 wpm or less. Silver contacts, non skid feet. **Standard model** has painted base and chrome top parts, **Deluxe model** has polished chrome base and top parts and jewel movements.

Standard (#110) – **$99.00** • **Deluxe** (#105) – **$120.00**

VIRBOPLEX Original Presentation • Finest quality semi-automatic key. Real jewel movements and widest speed range from less than 20 to 55 wpm+. Bright chrome parts mounted on a 24-caret gold base plate....... (#100) **$195.00**

VIRBOPLEX Vibrokeyers • **Single lever paddle** initiates the automatic dots and dashes of an electronic keyer. **Iambic model** allows utilization of automatic dot/dash insertion and other unique keyer features .... **See Price List**

VIBROPLEX BRASS RACER IAMBIC • Solid brass Iambic paddle on a polished hardwood base..........(#145) **$65.00**

VIBROPLEX EK-1 • Solid brass Iambic paddle with an 8044 electronic keyer built into the hardwood base. Iambic, dot/dash insertion, adjustable speed .... (#140) **$145.00**

Alpha Delta problem solvers . . .

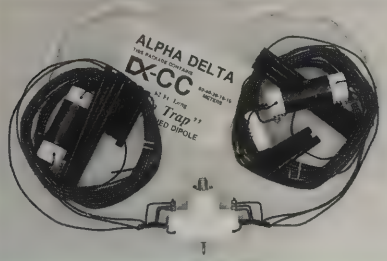
Limited Space High Performance Antennas

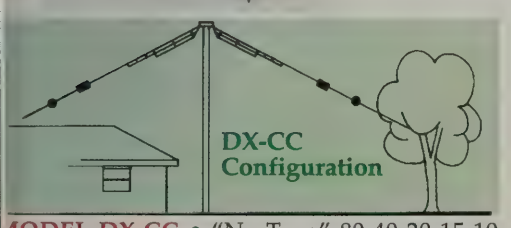
STAINLESS STEEL HARDWARE • FULLY ASSEMBLED • SEVERE WEATHER RATED COMPONENTS • NO-TRAP DESIGN

Unlike trap antennas, there are no capacitors to break down under high RF voltages. Full legal power operation – uses "ISO-RES" inductors and 12 ga. insulated solid copper wire. 50 Ω direct coax feed – tuners usually not required when operating in resonant bands, but may be safely used for multi-band operation if desired.

MODEL DX-A •160-80-40 Meter 1/4-Wave Twin Sloper. A top low frequency DX antenna. Combines the tremendous DX firepower of the 1/4-wave sloper with the wide bandwidth of the 1/2-wave dipole. One leg is 67', the other 55' – installs like an inverted-V. with ground return thru tower or down-lead **$59.95**

Model DX-SWL • SWL Broadcast Sloper Covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120 meter short-wave plus AM broadcast bands. Sloper design provides outstanding reception of low-angle DX signals. Multi-band transmit capability with an appropriate antenna tuner – up to 2KW. Overall length 60 ft **$69.95**



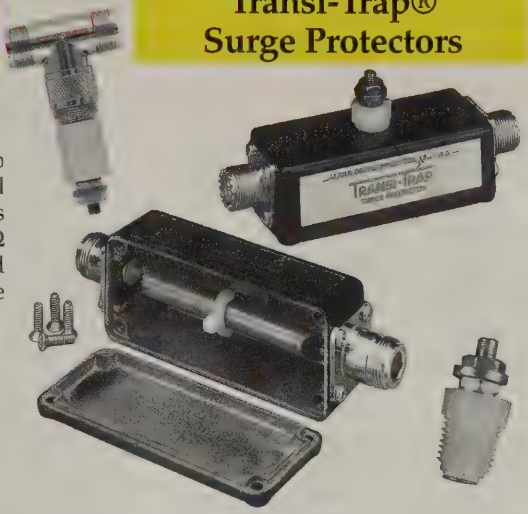


MODEL DX-CC • "No-Trap" 80-40-20-15-10 Meter Dipole or Inverted-V. Length - 82 ft **$99.95**

MODEL DX-DD • "No-Trap" 80-40 meter Dipole or Inverted-V. Length - 82 ft..... **$79.95**

MODEL DX-EE • "No-Trap" 40-20-15-10 meter Dipole or Inverted V. Will also cover 30-17-12 meters with a tuner. Length - 40 ft **$89.95**

Transi-Trap® Surge Protectors



Alpha Delta Transi-Trap Surge Protectors are gas surge arresters which will protect your valuable ham equipment much more effectively than the lower cost air-gap types.

The heart of the unit is the **Arc-Plug™**, which consists of two electrodes hermetically sealed in a gas filled ceramic cylinder. It acts like a voltage dependent switch that can repeatedly carry large currents for brief periods of time. When a voltage surge occurs on your transmission line, an arc forms between the electrodes allowing it to conduct harmlessly to an independent ground connection, reducing feedline voltage to less than 30 volts. That's protection!

An Arc-Plug can discharge 1000's of normal surges without replacement, and the life of the device is a function of the surge current amplitude and duration. After a sufficient number of discharges there is a gradual lowering of the breakdown voltage and insulation resistance. Replacement indicated by an increase in VSWR. If a unit is "hit" with a big strike, it is designed to fail "shorted", giving an instant indication that replacement is needed. Other brands fail "open", which leaves your expensive equipment unprotected without you knowing it.

Highest quality, finest materials. – heavy cast aluminum housing, brass constant-impedance (50Ω) element, brass ground hardware and only Amphenol connectors are used.

Standard Transi-Trap units are the choice of the U.S. Military, many government agencies, worldwide. The design is based on the U.S. NCS TIB85-10 Bulletin covering lightning and EMP (electromagnetic pulse) protection.

Transi-Trap Protectors are designed for 50Ω coaxial cable and are available with standard SO-239 connectors or N-type connectors which extend operation through 1 GHz.

Five different models to choose from . . .

MODEL RT • 200W thru 500 MHz..... **$32.95**
MODEL RT/N • 200W thru 1GHz **39.95**
MODEL HV • 2KW thru 500 MHz **35.95**
MODEL HV/N • 2KW thru 1GHz..... **42.95**
MODEL LT • "T"-type, 200W thru 30 MHz.. **22.95**

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the New AES® Credit Card

Lightning Surge Protected 2 & 4 Position Coax Switches

Alpha Delta Coaxial Antenna Switches are made only in the U.S.A. The extremely high quality custom design features a cast housing with a constant impedance micro-strip cavity for outstanding performance through UHF. No lossy wafer switches are used, and a solid positive detent roller bearing switch drive leaves no-doubt to which position is selected.The unused antenna circuits are automatically grounded to reduce antenna interaction, noise and the effects of lightning. For the antenna circuit that is in use, the famous replaceable **Alpha Delta Arc-Plug™** Cartridge provides continuous protection. Antenna switched in or out, you're well protected both ways! The Arc Plug is easily accessed through front panel so you may permanently mount the switch to to any surface. Both the two and four position models handle full legal amateur power.

Four different models to choose from . . .

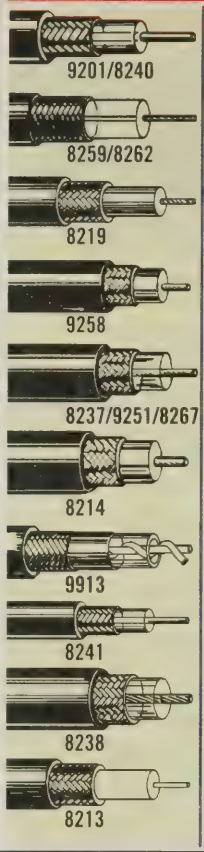
DELTA-2 • 2-position switch with SO-239 connectors, good to 500MHz **$49.95**
DELTA-2/N • 2-position switch with N-type connectors, good to 1.3 GHz..... **$64.95**
DELTA-4 • 4-position switch with SO-239 connectors, good to 500MHz **$74.95**
DELTA-4/N • 4-position switch with N-type connectors, good to 1.3 GHz..... **$89.95**

Limited Space Low Band DX Sloper

Model DX-B • A single wire high performance 1/4-wave DX sloper antenna for 160, 80, 40, and 30 meters. Designed for limited space installations where room doesn't allow for the Model DX-A twin sloper. Requires only 60 ft. overall and provides amazing DX performance at installation heights of only 35 ft., and with the low end at only 8 ft. This permits operation on those low bands for those hams previously not able to join in on the fun because of space limitations. It's pre-assembled and pre-tuned. Just put ot up and start enjoying low band operation. Utilizes stainless-steel hardware, 12 gauge solid copper wire and efficient Alpha Delta "Iso-Res" RF choke coils. To gain the same broadbanded performance like the DX-A, the DX-B is also designed to be used with a wide range antenna tuner, so no trimming or tweaking is necessary. 50 Ω coax feed, rated for full legal power operation **$69.95**

ALPHA DELTA COMMUNICATIONS, INC.

BELDEN Coaxial Cable



Belden number	RG-type	Dia. (in.)	Center conductor	Insulation type	Shield coverage	Jacket type	Imp. (Ω)	Vel. factor	Loss/100' 100 MHz
9201	58/U	.193	#20 solid copper	Solid polyethylene	78% bare copper	PVC	53	66%	4.5 dB
8240	58/U	.193	#20 stranded tinned cop.	Solid polyethylene	95% tinned copper	PVC	53.5	66%	4.5 dB
8259	58A/U	.193	#20 stranded tinned cop.	Solid polyethylene	96% tinned copper	PVC	50	66%	4.9 dB
8219	58C/U	.193	#20 stranded tinned cop.	Cellular polyethylene	96% tinned copper	PVC	50	78%	4.5 dB
8262	58/CU	.193	#20 stranded tinned cop.	Solid polyethylene	95% tinned copper	Non-contam. PVC	50	66%	4.9 dB
9258	8/X	.242	#16 stranded copper	Cellular polyethylene	95% bare copper	PVC	50	78%	3.7 dB
8237	8/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	PVC	52	66%	2.2 dB
8214	8/U	.405	#11 stranded copper	Cellular polyethylene	97% bare copper	PVC	50	78%	1.8 dB
9913	8/U	.405	#9½ solid copper	Semi-solid polyethylene	100% foil + 88% braid	PVC	50	84%	1.4 dB
9251	8A/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	52	66%	2.2 dB
8267	213/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	50	66%	2.2 dB
8241	59/U	.240	#22 solid copper	Solid polyethylene	95% bare copper	PVC	73	66%	3.4 dB
8238	11/U	.405	#18 stranded tinned cop.	Solid polyethylene	97% bare copper	PVC	75	66%	2.0 dB
8213	11/U	.405	#14 solid copper	Cellular polyethylene	95% bare copper	PVC	75	78%	1.5 dB

Antenna component protection...

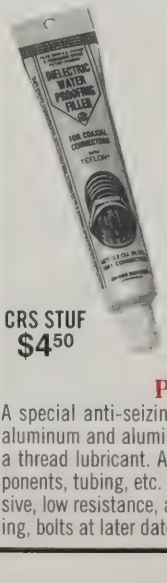
Coax Seal™ Hand Moldable Plastic

Quickly and effectively seals all types of coaxial fittings; baluns; antenna parts and connectors of all shapes – adheres to vinyl and poly vinyl coax outer jackets. Simply wrap it on like regular tape, then mold it to shape. It stays flexible and sealed at any temperature for years to resist moisture penetration and deterioration. Permanent flexibility makes it possible to remove and re-install fittings, then re-seals by simply re-forming the same material. Non-toxic, non-contaminating ..... Roll, 1/2" wide x 60" **UNV 104 $2.49**

STUF Dielectric Waterproofing Filler

for Coaxial Connectors

Waterproofs from the inside out!



CRS STUF **$4.50**

- High purity macroscopic foam, dielectrically simulates the coaxial cable core.
- No insertion loss.
- Contains no silicones, etc. to harm cable material
- Just fill connector and tighten. Filler hydraulically channels into all connector voids and ports where moisture can infiltrate, and seals.
- Non-harding, easy removal.
- Quick & easy.
- About 4.5¢ per connection.

PENETROX A

A special anti-seizing compound for all bare aluminum to aluminum and aluminum to copper connections, and also as a thread lubricant. Apply to mating pieces of antenna components, tubing, etc. before assembly to provide a non-corrosive, low resistance, airtight seal. Makes disassembly of tubing, bolts at later date a breeze... 4 oz tube **PENETROXA $7.20**

WALNUT CREEK

QRZ!Ham Radio CDROM

WAL QRZHAM

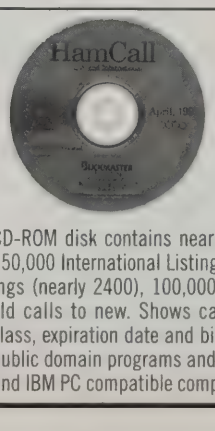
$29.95

The QRZ! HamRadio CD ROM – the most current radio publication of its kind. Contains name, address and license information for over 650,000 amateur radio operators. Search and retrieval software for both DOS and Windows 3.1* provides rapid access. Search and display by callsign, name, city, street address, or zip code. Save the results to file or generate print ready mailing labels. Industry standard ASCII output files are word processor and database ready.

The QRZ! Ham Radio CDROM also includes:

- Hundreds of PC compatible Amateur Radio Programs
- Radio Mods (in Hypertext under Windows)
- TCP/IP software, Packet Radio BBS's, and Satellite Tracking Programs
- Morse Code Training Software, Radio Control Programs, Contest Logging
- RTTY, WEFAX, Baycom, Rose, TheNet, TAPR, DSP
- FCC Rules and Regulations, AMateur Radio Question Pools
- USENET Ham Radio News Archives, ARRL Bulletins
- Sound Blaster Compatible, WAV files for TNC testing

* Windows 3.1 w/VGA display (color or monochrome) adapter required



BUCKMASTER

HamCall/CD ROM for Apple Mac and IBM PC Compatibles

CD-ROM disk contains nearly 550,000 U.S. HAMS and nearly 250,000 International Listings. Clubs, Military and RACES listings (nearly 2400), 100,000 U.S. calls cross references from old calls to new. Shows call sign, name, address, license class, expiration date and birth year. Includes ore than 15,000 public domain programs and various data files. For Apple Mac and IBM PC compatible computers.....**BUCHAMCALL $50.00**

PolyPhaser CORPORATION *Lightning Protection*

BROADBAND HF/VHF/UHF COAXIAL PROTECTORS

Multi-strike capability with low strike throughput energy. Aluminum enclosure. VSWR: ≤1.1 over frequency range.

FLANGE MOUNT (left)

IS-50UX-C0 • Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W..... **$52.95**

IC-50UX-C1 • Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W **$52.95**

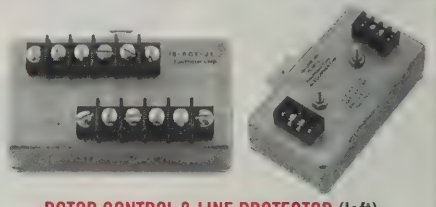
IC-50NX-C2 • Range: 125MHz to 1000MHz. Max.Power: VHF 375W, UHF (low) 125W, 800MHz -1 GHz 50W. **Type N** .. **$52.95**

BULKHEAD MOUNT (right)

IS-B50LU-C0 • Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W..... **$59.95**

IS-B50LU-C1 • Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W..... **$59.95**

IS-B50LN-C2 • Range: 125MHz - 1000MHz. Max. Power: VHF 375W, UHF (low) 125W, 800MHz-1 GHz 50W. **Type N**.... **$59.95**



ROTOR CONTROL 8-LINE PROTECTOR (left)

IS-RCT • Provides protection for rotor controllers, motors, control box and other nearby equipment. EMP rated - faster than gas tubes with lower turn-on voltage. Water tight enclosure with mounting stud. 7½ "h x 3¼ "w x 2½"d **$46.95**

IN-LINE PHONE LINE PROTECTOR (right)

Model IS-SPTL • Multi-stage protection, with large bandwidth and fast response time, EMP rated. For telephone trunk lines - handles standard ring voltages to 105Vrms. Handles surges up to 26 or 40kA without damaging let through voltages. Shielded metal enclosure. 1¾"h x 4½ "w x 3¼"d .. **$57.95**

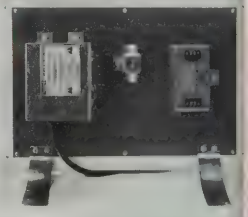
POWER LINE EXTENSION PROTECTOR

In-line, multi-stage EMP rated protectors provide multi-strike power line protection, filtering and proper grounding when equipment use requires an extension cord. Two outlets, master on/off switch, circuit breaker for added protection. All aluminum grounded enclosure, 4¾"wide. 120V AC.

IS-PLDO-120-15A • with 15' cord, 120VAC @ 15A.....**$143.95**

IS-PLDO-120-20A • with 6' cord, 120V AC @ 20A.....**$179.95**

COPPER AND ALUMINUM GROUNDING PANELS



Aluminum or copper plate .062" panels mounted on painted off-white 1/2" plywood backing. Used to mount/ground protectors and to establish a single point location for grounding equipment racks/chassis. Mounts on 16" on center, comes with (4) concrete anchors (10) mounting screws, 10 ft. of 1-1/2" copper grounding strap (2) brass sandwich plates and joint compound. 18"w x 12"h.

AL-SPGP • Aluminum single point ground panel.....**$52.9**

CU-SPGP • Copper single point ground panel **52.95**

LOW INDUCTANCE COPPER INTERCONNECT STRAP

Copper strap has an advantage over wire when used for a ground path because it has lower inductance and cannot be fused open by lightning. For example: 1.5" strap has a lower inductance than #2.0 stranded wire. Easy to work with (cut solder, etc.) - 6 AWG thickness (.0159"). Useable above or in-ground applications. Sold by the foot up to 450' lengths.

1.5" wide **95¢/ft.**• 3" wide **$2.75/ft.** • 6"wide **$3.95/ft.**

R5 / R7 Halfwave HF Verticals

The right antennas for every ham.

The "R" series antennas have revolutionized the way hams look at verticals. Dedicated hams all over the world have tried the R5 and R7 and have been amazed that these compact, rugged verticals can perform the way they do. The outdated idea that a vertical antenna is a serious compromise has been put to rest. Not only are these antennas compact and able to fit just about anywhere, but they're built strong and built to last.

The R5 and R7 are the result of decades of experience in antenna design. They have proven themselves on Arctic DX-peditions, tropical island contest stations, ocean vessels and even on a hot air balloon trip. Their greatest success, though, has been in amateur home stations throughout the world where they provide exceptional performance.

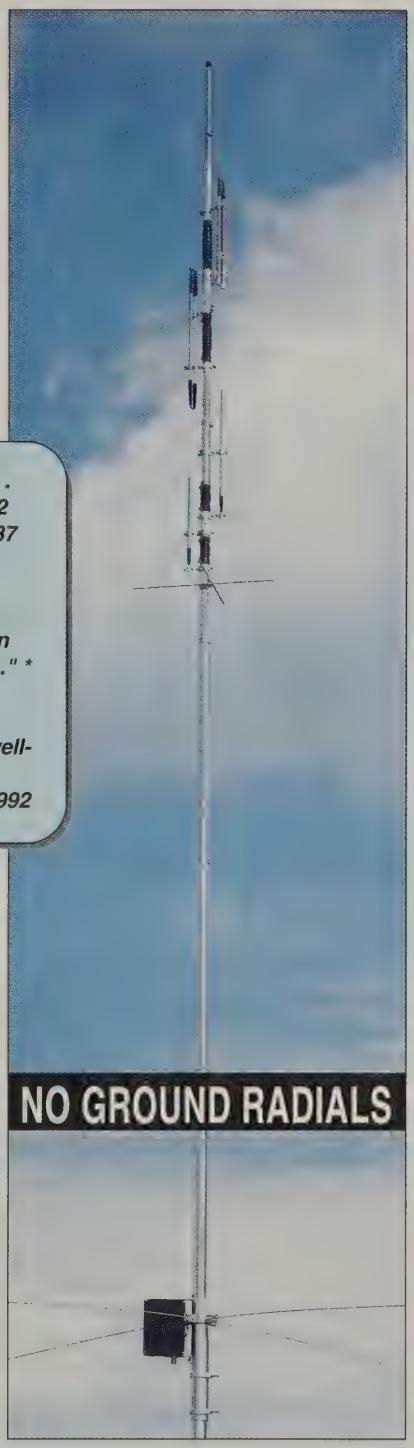
Whether you understand the technology involved or not, know that these compact antennas perform like no others. Tune in on 10 to 40 meters and talk to many enthusiastic R5 and R7 owners.

- **No Ground Radials**
- **Compact Size**
- **Low Angle Radiation**
- **Automatic Band Switching**
- **Broadband Matching**
- **Mount Anywhere**
- **No Moving Parts**

MODEL	R5	R7
Frequency, MHz	28, 24, 21, 18, 14	28, 24, 21, 18, 14, 10, 7
Gain, dBi	3	3
Electrical Wavelength	Halfwave	Halfwave
SWR 2:1 Bandwidth	10 m-2 MHz	10 m-2 MHz
	12 m-100 KHz	12 m-100 KHz
	15 m-450 KHz	15 m-450 KHz
	17 m-100 KHz	17 m-100 KHz
	20 m-350 KHz	20 m-150 KHz
		30 m-50 KHz
		40 m-75 KHz
Power Rating, Watts PEP	1800	1800
Radiation Angle, Degrees	16	16
Frequency Selection	Automatic	Automatic
Horizontal Rad. Pattern Deg.	360	360
Height, ft (m)	17 (5.2)	22.5 (6.9)
Mast Size Range, in	1.5-1.75	1.5-1.75
(cm)	(3.8-4.4)	(3.8-4.4)
Wind Load, ft2 (m2)	1.4 (.13)	2.25 (.21)
Weight, lb (kg)	8.7 (4)	12.3 (5.6)
49" Counterpoise Radials Supplied	4	7

10, 12, 15, 17, 20 Meters

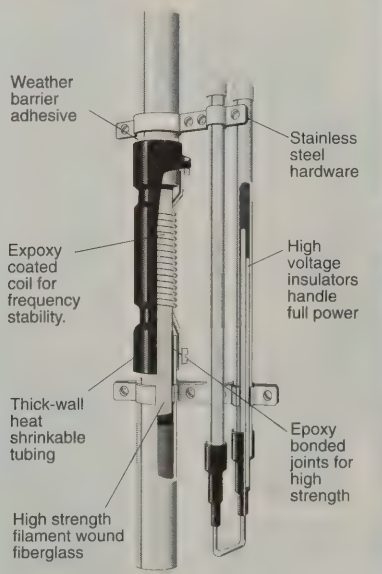
Thousands of R5's are currently in use by satisfied hams worldwide. This compact, 17 foot high halfwave has gained popularity because of its reputation for uncanny performance level's and the fit-anywhere convenience of a vertical without ground radials. Put the world in your log book on 10 through 20 meters with the Cushcraft R5 halfwave vertical.



"It did everything I hoped and more. . . In 27-1/2 hours of operating over 5-1/2 days, we made 2788 CW QSO's with 87 countries. . ." *
QST , Oct. 1990

"I had used the antenna with my RV in Mexico and worked over 80 countries." *
CQ, Nov. 1989

"I must congradulate Cushcraft for a well-made, easy-to-use antenna." *
Practical Wireless , Sept. 1992



"The antenna was of vital importance to me as I used it twice a week to speak to my wife and children back in New York." (WA2RUD / 5H3WL / 5Z4PI)

"The R5 works superb. Best DX vertical I ever had during 30 years of ham practice." (DJ8WI)

"Everything assembled beautifully and how nice not having to have an antenna tuning unit when band changing." (G4JZK)

"Thanks for designing such an excellent antenna that provides so much fun for us apartment dwellers." (N1LKH)

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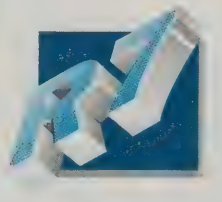
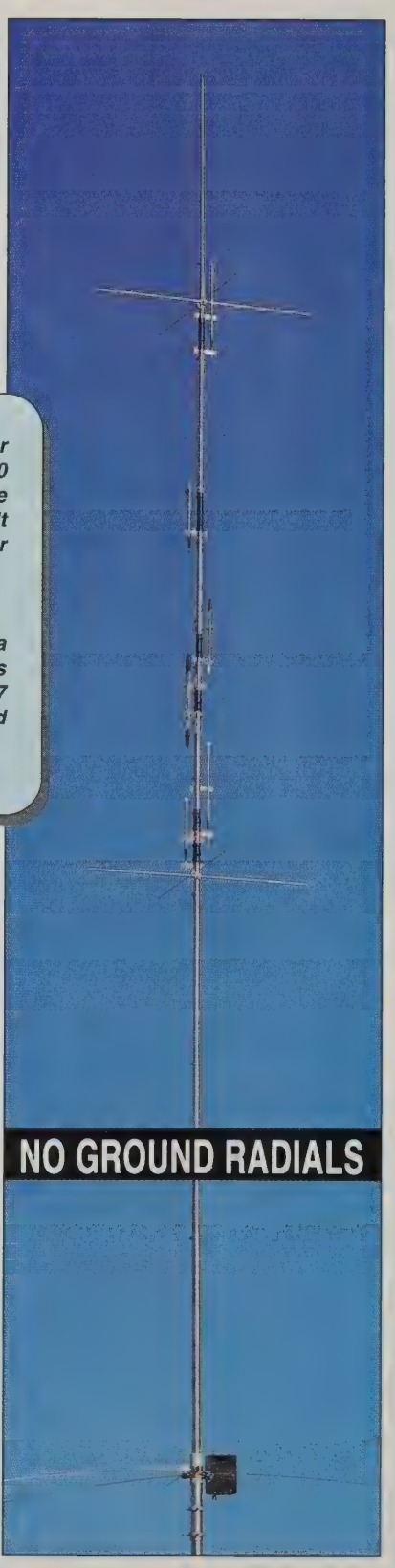
10, 12, 15, 17, 20, 30, 40 Meters



This 22 foot marvel packs a punch on 10 to 40 meters that has to be experienced to be believed. With only 7 short counterpoise rods, the R7 will fit just about anywhere. If you're looking for the most performance in the smallest package then the R7 is for you. Precisely tuned radio frequency traps optimized for each band and strategically placed X-hats enable the R7 to radiate a low angle signal that makes working DX a snap. Experience 7 band performance anywhere with the incredible R7.



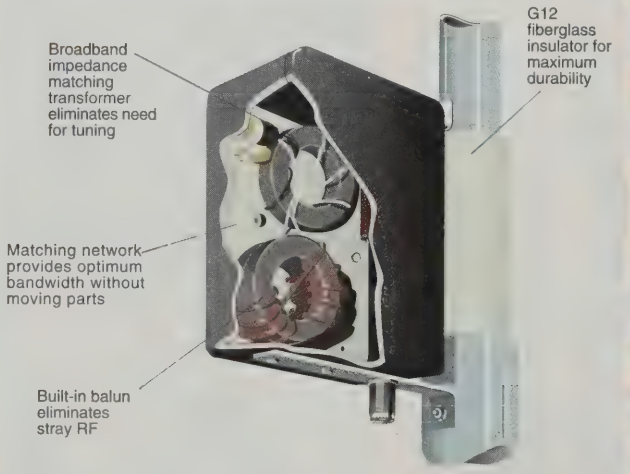
The R7 and R5 do not need ground radials. Because of their compact size, they are perfectly suited for almost any limited space application. Whether you're operating from a balcony, RV, rooftop or mobile environment, you will find the R7 and R5 to be exceptional performers.

"It's an excellent solution for somebody who's looking for a low-profile homestation antenna that works well on 40 through 10 meters. . . ideal for portable operation because it easily breaks down into a small package, and you don't have to worry about a radial system or finding trees for supports." *

QST, August 1992

"The instructions are very detailed and clear. . .the antenna goes together in about 30 minutes. . . running 100 Watts and using the R7 I managed to work DXCC (actually 117 countries). . .hardware is of very outstanding material, and the antenna is best described as rugged." *

CQ, August 1992

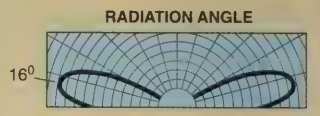


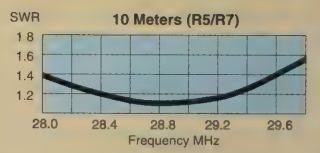
"Excelentes resultados con la R7" (XE1USN)

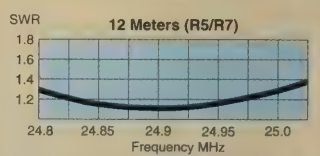
"It performed excellently even under extreme weather conditions both electrically and mechanically." (3Y2GV) Antarctica

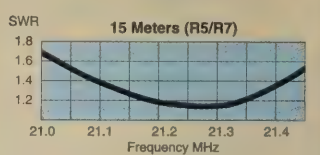
"Tropical storm Zelda struck Kwajalein on Thanksgiving Day. . . As the beams blew down, my R7 vertical stayed up." (V73CT)

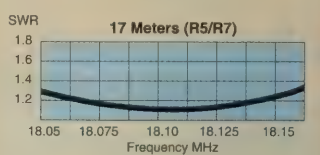
"Used R7 on IOTA EU-135 expedition. . . Beautiful performance!" (SM3DMP)

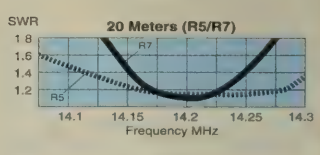


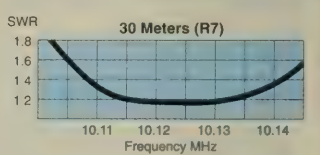


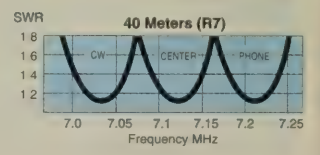












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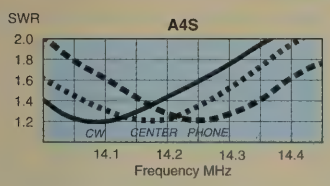
World Ranger Multiband HF Yagis

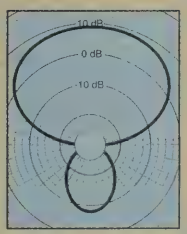
10, 15, 20, 40 Meters

Cushcraft Tribanders Make More DX Fun!

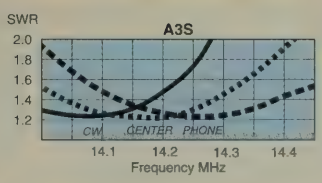
Our three and four element tribanders provide the versatility and performance that you need for reliable communication around the world. And they last! Cushcraft's World Rangers are made with 6063-T832 aluminum tubing, weatherproof traps, and fiberglass insulators to stand up to the weather. Our World Rangers have 50 Ohm twin terminal connectors and need no balun. They are designed with fewer parts for easier assembly, lower weight and less windload. You will spend your time in the shack, not on the tower!

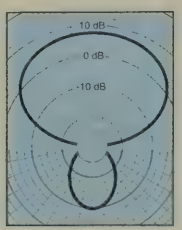
Ham radio is a lot more fun when you have a dependable antenna like our World Ranger. Make your choice from our A4S , A3S and A3WS models. Add a 30 or 40 meter kit to make your antenna even more versatile!





A4S
RADIATION
PATTERN





A3S
RADIATION
PATTERN

A4S Four Element Beam

With stainless steel hardware.

The A4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A4S the preferred antenna for your contest work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. The A4S has pinned boom sections and formed aluminum brackets to keep elements straight under all conditions. And our solid construction keeps the A4S on the tower!

A3S Three Element Beam

With stainless steel hardware.

The A3 World Ranger, our top selling tribander, has become the A3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A3S. It's a proven performer in DX-peditions and contests and handles full power from your linear. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.

When space is at a premium, but you want the benefits of a full-size tribander, the A3S is right for you!

MODEL	A4S	A3S
Frequency, MHz	28, 21, 14	28, 21, 14
No. Elements	4	3
Forward Gain, dBd	8.9	8
Front to Back Ratio, dB	25	25
SWR 1.2:1 Typical 2:1 Bandwidth KHz	>500	>500
Power Rating, Watts PEP	2000	2000
3 dB Beam Width, Deg. E Plane	58	60
Boom Length, ft (m)	18 (5.48)	14 (4.27)
Boom Diameter, In (cm)	2 (5.10)	1.5 (3.81
Longest Element, ft (m)	32 (9.75)	27.75 (8.45)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	18.4 (5.49)	15.5 (4.72)
Mast Size Range, in (cm)	1.25-2.00 (3.18-5.08)	1.25-2 (3.18-5.08)
Wind Load, ft^2 (m^2)	5.50 (0.51)	4.36 (0.47)
Weight, lb (kg)	37 (16.8)	27 (12.9)

30 and 40 Meter Add-On Kits

40 meters will come alive by adding one of these kits to the dipole of your A3S or A4S. The kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit the A103.

A743 **7 MHz/10 MHz kit for A3S**
A744 **7 MHz/10 MHz kit for A4S**
A103 **10 MHz kit for A3WS**

MODEL	A743/A744		A103
BAND	7 MHz (40 m)	10 MHz (30 m)	10 MHz (30 m)
Driven Element with Adapter kit, ft (m)	33.19 min. 35.33 max. (10.12-10.77)	27.12 min. 28.4 max. (8.27-8.66)	32.1 (9.8)
Windloading ft2 (m2)	.58 (.05)	.27 (.03)	.45 (.04)
Bandwidth, KHz	125	150	250
Power Rating, Watts	2000 PEP	2000 PEP	2000 PEP
Side Rejection, dB	20	20	20
Weight, lb (kg)	3.44 (1.56)	2.29 (1.04)	3.25 (1.47)

10 through 20 Meters

cushcraft CORPORATION

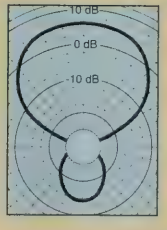
Skylog

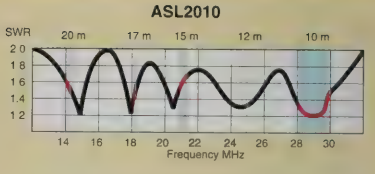
- **Continuous five band coverage from 13.5 to 32 MHz**
- **Constant gain over entire frequency range**
- **6.4 dBd gain, 65 degree beamwidth**
- **High efficiency design, antenna stays cool and VSWR steady**
- **18 foot boom and 19.5 foot turning radius**

This all new log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

MODEL	A3WS	ASL2010
Frequency, MHz	24, 18	13.5-32
No. Elements	3	8
Forward Gain, dBd	8.0	6.4
Front to Back Ratio, dB	25	15-20
SWR 1.2:1 Typical		
2:1 Bandwidth	300 KHz	18.5 MHz
Power Rating, Watts	2000 PEP	2000
3 dB Beam Width, Deg. E Plane	60	65
Boom Length, ft (m)	14 (4.27)	18 (5.48)
Boom Diameter, In (cm)	1.50 (3.81)	2.0 (5.08)
Longest Element, ft (m)	25.1 (7.66)	38 (11.58)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	14.4 (4.4)	19.25 (5.86)
Mast Size Range, in	1.25-2	1.5-2
(cm)	(3.18-5.08)	(3.18-5.08)
Wind Load, ft^2 (m^2)	4.1 (.38)	10.1 (.93)
Weight, lb (kg)	22.5 (10.2)	55 (25.5)

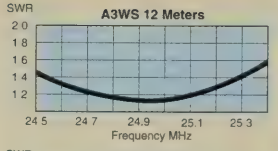
ASL2010

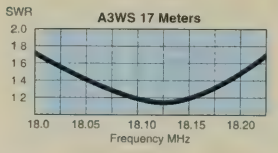




A3WS WARC Bands 3 Element Beam

Enjoy the excitement of our newest HF bands with this all new beam. The A3WS gives full performance on 12 and 17 meters. With the addition of our easy-to-use A103 add on kit, it will also cover 30 meters. A3WS needs only a lightweight tower and rotator or you can mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. Take charge of 12, 17 and 30 meters with the new A3WS.





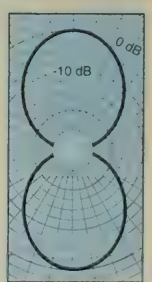
Rotatable Dipoles

Our World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.

D3W World Ranger Dipole

The perfect answer for the WARC bands. This rotatable dipole is easily mounted on the same mast as your existing tri-bander or other antennas. With a bi-directional pattern it will give you amazing performance on the new bands.

MODEL	D40	D4	D3	D3W
Frequency, MHz	7	28,21,14,7	28,21,14	24,18,10
SWR 1.2:1 Typical				
2:1 Bandwidth, KHz	200	>350 40>125	>500	>200
Power Rating Watts PEP	2000	2000	2000	2000
Length ft	42.25	35.8	25.8	34.0
(m)	(12.88)	(10.92)	(7.86)	(10.37)
Mast Size, in(cm)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)
Wind Load, ft2 (m2)	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg)	12 (5)	13 (6)	9 (4)	11 (5)



Typical Dipole Radiation Pattern

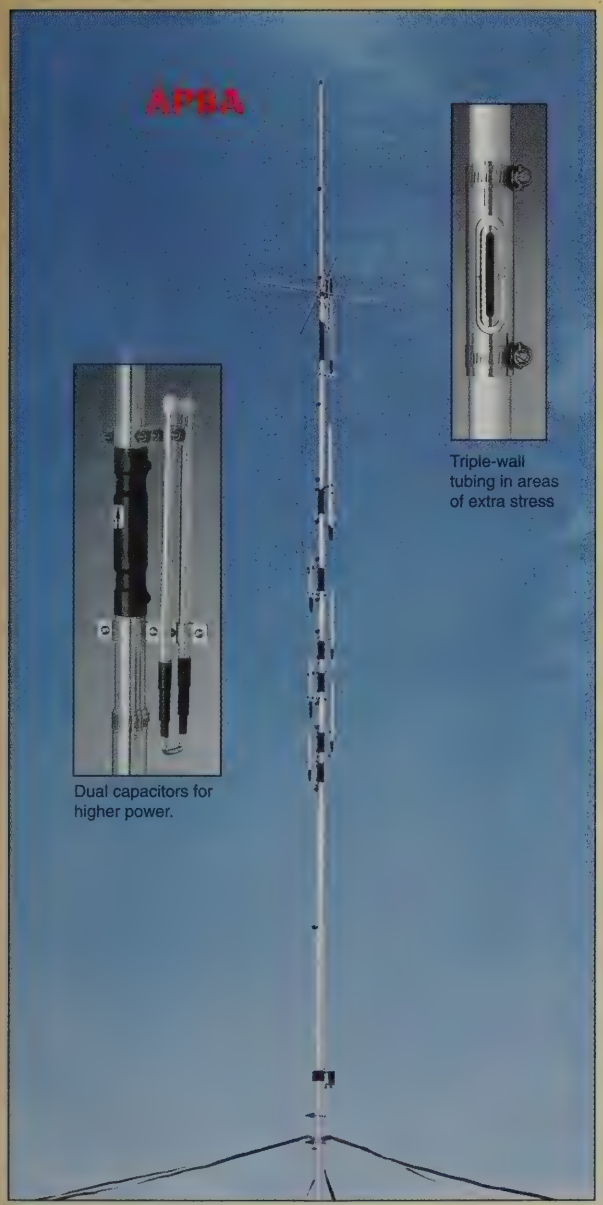
Multiband HF Quarterwave Verticals

10 Through 80 Meters

Multiband verticals are a cost effective solution to the space problems that many of us face. Cushcraft AV3, AV5 and AP8A verticals are the right choice when a beam is not practical.

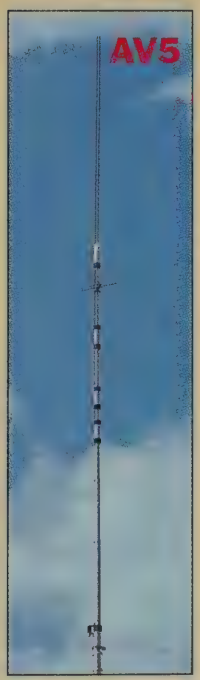
Our AV3 three-band and AV5 five-band are economical and offer good performance. They may be your first choice in multiband verticals because of their broadband performance, enclosed traps, and stainless steel hardware.

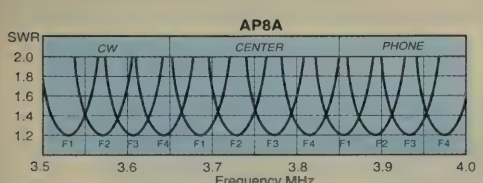
AP8A, AV3 AND AV5 REQUIRE RADIALS

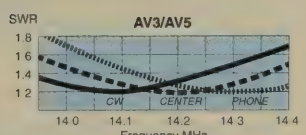


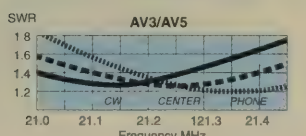
Triple-wall tubing in areas of extra stress

Dual capacitors for higher power.









AP8A, Eight Bands In One Tough Antenna

The AP8A is the next generation eight-band quarterwave that has been strengthened with thick wall tubing, up to three layers deep in some sections, and high tensile strength fiberglass. The traps have been beefed up to handle the legal limit and are moisture sealed. You can be up and running on 10 through 80 meters in no time. (The APR-18A Radial Kit will make the job even easier.) The key to the AP8A's eight band coverage is the automatic bandswitching and efficient traps. The traps are parallel LC circuits which allow broadband operation. The AP8A is a very popular antenna with new hams because it's such a great value. Eight bands in one rugged antenna at an affordable price.

MODEL	AP8A
Frequency, MHz	28, 24, 21, 18, 14, 10, 7, 3.5
Electrical Wavelength	1/4
SWR 1.2:1 Typical	
2:1 Bandwidth	Full Band Except 40M>150 KHz & 80 M>80 KHz
Power Rating, Watts PEP	2000
Radiation Angle, degrees	18
Frequency Selection	Automatic
Horizontal Radiation Pattern, degrees	360
Height, ft (m)	26 (7.92)
Mast Size Range, in (cm)	1.5-1.75 (3.8-4.4)
Wind Load, ft^2 (m^2)	1.7 (.16)
Weight, lb (kg)	9.5 (4.3)
Radials Required	Normally
Radial Kit Available	Yes, APR18A

APR18A Radial Kit

The Cushcraft APR-18A radial kit is the perfect match for the AP8A, AV3, AV5, or any quarterwave amateur HF vertical where a good low angle signal on the horizon and a low VSWR are important. The kit offers maximum performance on all HF bands and consists of only 9 multiple and single-conductor radials, with a maximum length of only 31 feet. It's great for quick installation at either ground level or rooftop sites.

AV3 Three Band & AV5 Five Band

Our AV3 handles 10, 15, and 20 meters with fine performance and easy assembly. It has the same rugged construction as the AV5. The AV5 works with the popular 10, 15, 20, 40 and 80 meter bands with broad bandwidth and full legal power. For versatility, this is the antenna for you!

MODEL	AV3	AV5
Frequency, MHz	28, 21, 14	28, 21, 14, 7, 3.5
Electrical Wavelength	1/4	1/4
SWR 1.2:1 Typical		
2:1 Bandwidth	Full Band	Full Band except 80 M>70 KHz
Power Rating, Watts PEP	2000	2000
Radiation Angle, degrees	18	18
Frequency Selection	Automatic	Automatic
Horizontal Rad. Pattern, deg.	360	360
Height, ft (m)	14 (4.2)	25 (7.4)
Mast Size Range, in (cm)	1.5-1.75 (3.8-4.4)	1.5-1.75 (3.8-4.4)
Wind Load, ft^2 (m^2)	1.02 (.1)	1.89 (.19)
Weight, lb (kg)	5 (2.3)	8 (3.6)
Radials Required	Normally	Normally
Radial Kit Available	Yes, APR18A	Yes, APR18A

10 Meters

The three element model is a great selling antenna! If you have the space, and need the utmost in performance, then try our four element Skywalker. You can't go wrong with these contest winners, especially if you are a Novice new to ten meters!

MODEL	10-4CD	10-3CD
Frequency, MHz	28.0-29.7	28.0-29.7
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>900	>1400
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	40	40
Boom Length, ft (m)	16 (4.88)	10 (3.05)
Boom Diameter, In (cm)	2.0	1.63-1.50
	(5.08)	(4.1-3.8)
Longest Element, ft (m)	17.58 (5.34)	17.66 (5.38)
Element Center Dia, in (cm)	.88-.63	.88-.63
	(2.2-1.6)	(2.2-1.6)
Turning Radius, ft (m)	11.5 (3.5)	10 (3.05)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft^2 (m^2)	3.1 (.29)	2.3 (.21)
Weight, lb (kg)	18 (8.16)	11 (5.00)

15 Meters

These two Skywalkers will keep you enthusiastic about 15 meters. Our three element model gives fine performance in limited areas. For maximum gain, select the four-element model with its new 2" diameter boom. Or, try stacking two four element Skywalkers for incredible performance! Reddi-match tuning makes it easy.

The 10dB forward gain of our 15-4CD is the result of computer design and will keep you the first in line during pileups!

MODEL	15-4CD	15-3CD
Frequency, MHz	21.0-21.45	21.0-21.45
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	500	500
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	20 (6.10)	14 (4.27)
Boom Diameter, In (cm)	2.0	2.0
	(5.08)	(5.08)
Longest Element, ft (m)	23.33 (7.11)	23.16(7.06)
Element Center Dia, in (cm)	1 (2.5)	1 (2.5)
Turning Radius, ft (m)	15.4 (4.72)	13.5 (4.11)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft^2 (m^2)	4.5 (.42)	3.4 (.32)
Weight, lb (kg)	25 (11.34)	20 (9.07)

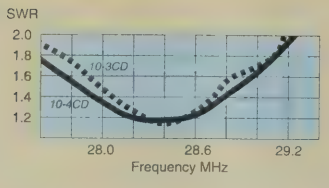
More Performance Than You Ever Imagined

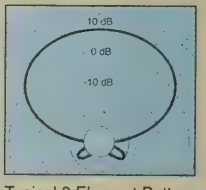
More contacts, less waiting, less interference, and a better signal at the other end are yours with a Skywalker!

Computer-aided design helped us maximize forward gain while reducing sidelobes and SWR. Our 50 Ohm Reddi-match feed uses a UHF SO-239 for easy connection.

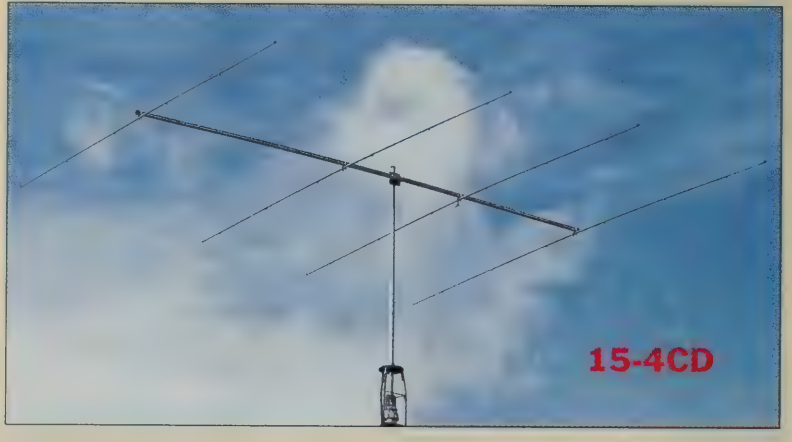
Construction features include improved larger diameter pinned booms with fewer sections, heavy-wall heat treated 6063-T832 aluminum tubing, stainless steel fasteners, worm drive element clamps, and carefully formed aluminum brackets.

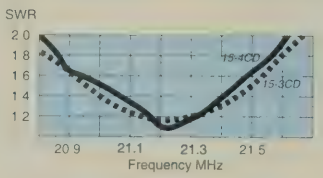
Assembly is easy and installation can often be done by one person!
Skywalkers are contest winners. One of these fine antennas is perfect for you.

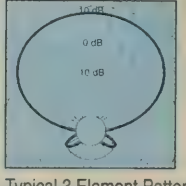




Typical 3 Element Pattern



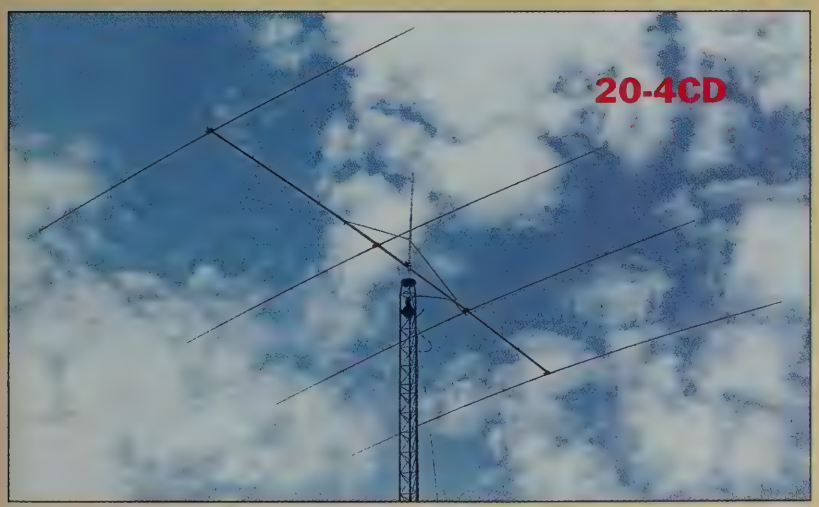


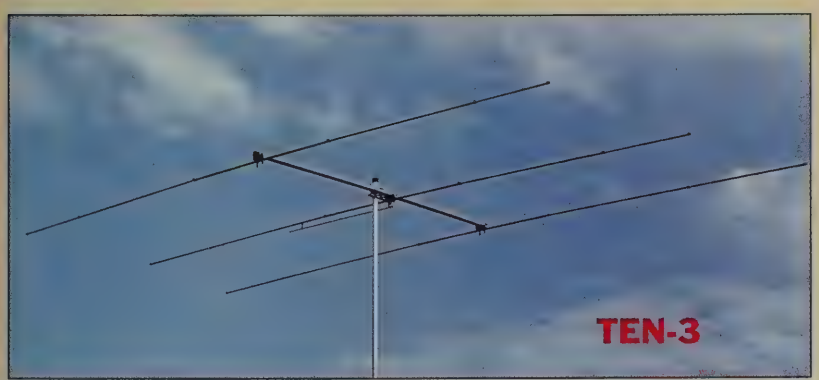


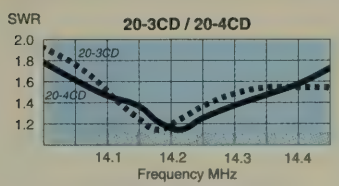
Typical 3 Element Pattern

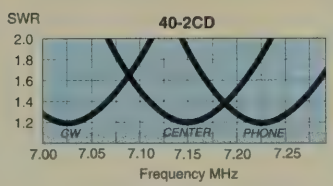
Skywalker Monoband HF Yagis

10, 20, 40 Meters









40 Meters

This Skywalker holds the North American contact record for 40 meters. A two element compact antenna, it has the performance that you want for 7 MHz work. The dipole center insulator is heavy duty with a twin terminal 50 Ohm connection. It is by far the most popular two element 40 meter beam!

20 Meters

Our four-element 20 meter Skywalker and its three element compact version will punch your signal through the QRM.

Stainless steel fasteners and double U-bolt brackets ensure that your antenna will last for years.

10 Meters TEN-3

Looking for a lightweight, economical alternative to the 10 meter Skywalkers? Choose the TEN-3. Although its popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom making it easy to install on a very simple mount with only a lightweight rotator. The matching system is our proven Reddi Match for 50 Ohm no balun feed and SO-239 connector. Make more positive contacts with the new TEN-3.

MODEL	40-2CD	TEN-3
Frequency, MHz	7.0-7.3	28-29.7
No. Elements	2	3
Forward Gain, dBd	5.5	8
Front to Back Ratio, dB	20	25
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	200	>1500
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	70	64
Side Lobe Attenuation	>40	>40
Boom Length, ft (m)	23(6.9)	8 (2.44)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	1.38-1.25(3.5-3.2)
Longest Element, ft (m)	43 (12.9)	18 (5.49)
Element Center Dia., in (cm)	1.25 (3.1)	.75 (1.9)
Turning Radius, ft (m)	23.93 (7.29)	9.8 (3.0)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft^2 (m^2)	6.38 (.57)	2.0 (.20)
Weight, lb (kg)	44 (19.8)	9.9 (4.45)

MODEL	20-4CD	20-3CD
Frequency, MHz	14.0-14.35	14.0-14.35
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>400	>300
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	32 (9.75)	20 (6.1)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	2.0 (5.08)
Longest Element, ft (m)	36.08 (11.00)	35.95(10.96)
Element Center Dia., in (cm)	1.25 (3.1)	1.25 (3.1)
Turning Radius, ft (m)	23.75 (7.2)	20 (6.1)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft^2 (m^2)	8.1 (.75)	5.5 (.51)
Weight, lb (kg)	55 (24.95)	30 (13.61)

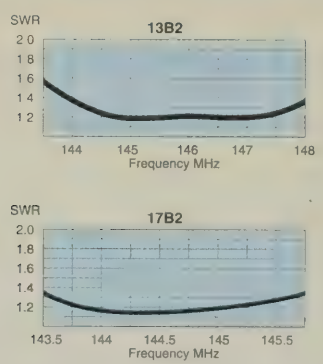
17B2 - 17 Element CW/SSB

The serious two meter operator who is interested in EME, aurora, scatter, SSB, CW, tropo etc, will choose the 17B2. It has 17 elements on a 4.5 wavelength boom. Our computer-aided design supported by precise test range data and the latest manufacturing technology gives you a cleaner pattern and 18 dBd gain in this long boom design. Significant enhancement is provided by the new UltraMatch balanced feed system with N-connector. The improved Boomer brace system is easier to install. 17B2 is a new stronger Boomer with a cleaner profile, less weight and wind load. All these features result in contest winning performance and more day to day operating enjoyment.

13B2 -13 Element Wideband

The new 13B2 is as versatile as the 17B2 is specialized. 13B2 will be your choice for high performance across the entire 2 meter band. New and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband across the 4 MHz operating range. The 13B2 is easily mounted vertically or horizontally for maximum performance on your favorite mode. Its optimum boom length makes it a popular antenna that fits just about anywhere. The new UltraMatch balanced feed on the 13B2 provides a 50 Ohm match via a standard SO-239 UHF female connector.

MODEL	13B2	17B2
Frequency, MHz	144-148	144-145
No. Elements	13	17
Forward Gain, dBd	15.8	18.0
Front to Back Ratio, dB	26	26
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>2
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 18	2 x 14.5
H Plane	2 x 19	2 x 15
Side Lobe Atten., dB, E Plane	>60	>60
Boom Length, ft (m)	15 (4.57)	31 (9.45)
Electrical Wavelength	2.2	4.5
Longest Element, in (cm)	39.75 (101)	40.75 (103.5)
Turning Radius, ft (m)	8.9 (2.7)	17.25 (5.26)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft^2 (m^2)	1.8 (.17)	3.9 (.36)
Weight, lb (kg)	6.7 (.31)	15.75 (7.14)



Boomers are easily stacked for more gain. See page 17 for details.

"The 13B2 was very easy to assemble. Very good instructions. High quality parts. A very neat looking antenna." (NM8T)

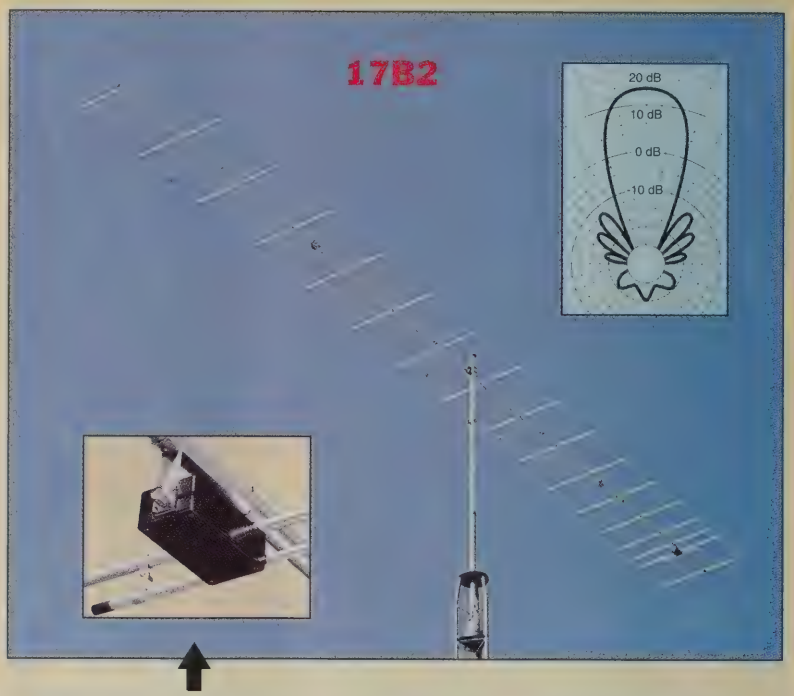
"Reliable contacts [on 13B2] to repeaters 100 miles using low power. Horizontally polarized 150 miles plus." (N9MHV)

"New 17B2 is nice improvement over 4218XL both mechanically and electrically." (VE3ASO)

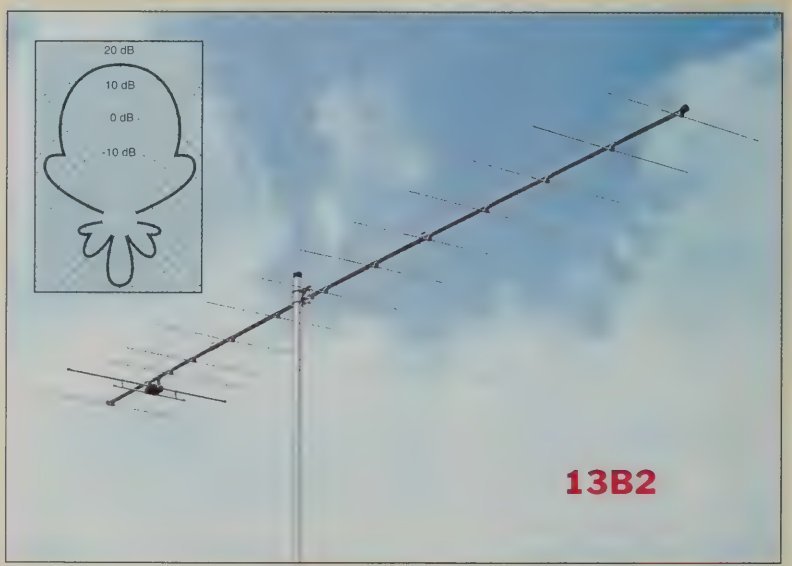
The Boomer tradition continues.

New Boomers offer more gain and cleaner patterns with greater mechanical strength. New element spacings and lengths plus an improved feed system make it happen. Select from the 17B2 for the strongest signal on the low end of the band or the 13B2 for broadband performance across the band.

Cushcraft Boomers all feature solid rod elements, stainless steel hardware and very easy to follow assembly instructions. Simple tools and a little time are all that are needed for assembly. The new Boomer line will make your operating time more rewarding and enjoyable. Move up to the new Boomers today.



The new Cushcraft UltraMatch is a modified T-match system that provides a balanced current distribution on your Boomer. It uses UltraLink teflon® dielectric cable allowing for low loss high power applications. UltraMatch is completely enclosed for weather proofing. UltraMatch features an N-connector on the 17B2 and UHF SO239 on the 13B2. When all weather performance is important, you will choose the new UltraMatched Boomers everytime.

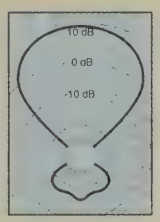


70 CM, 2, 6 Meters

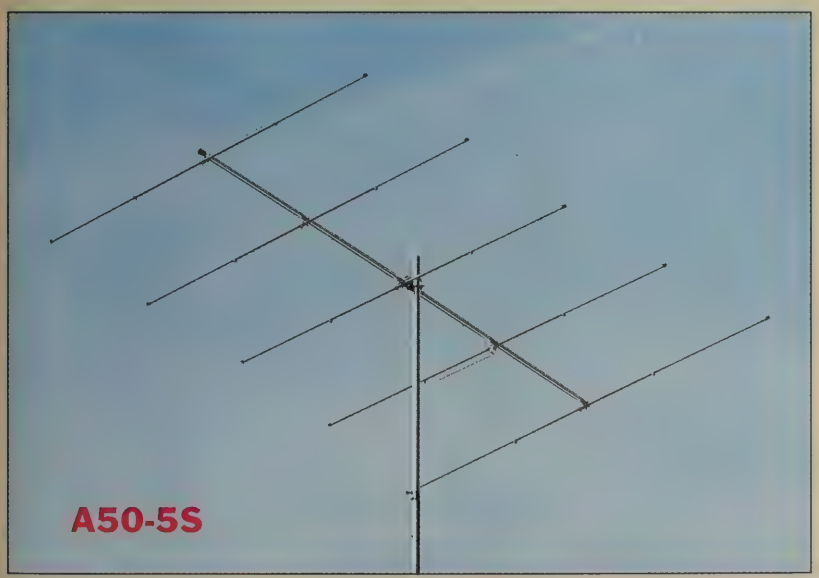
6 Meters

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Cushcraft Yagis.

MODEL	A50-3S	A50-5S	A50-6S
Frequency, MHZ	50-54	50-54	50-54
No. Elements	3	5	6
Forward Gain, dBd	8	10.5	11.6
Front to Back Ratio, dB	20	24	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>1	>1	>1
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	76	56	48
Boom Length, ft (m)	6 (1.8)	12 (3.7)	20 (6.1)
Longest Element, in (cm)	117 (300)	123 (312)	119 (302)
Turning Radius, ft (m)	6 (1.8)	7.8 (2.37)	11.5 (3.5)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft2 (m2)	1.80 (0.17)	2.9 (0.273)	4.46 (.41)
Weight, lb (kg)	7 (3.2)	11 (5.0)	18 (8.2)



A50-6S RADIATION PATTERN



70 CM / 2 Meters

A148-10S is the latest generation of our incredible 2 meter Yagis. With its computer optimized design it has outstanding gain and pattern. This antenna is for SSB, CW, tropo or any mode. It has all stainless steel hardware and SO-239 connector. Assembly is quick with easy-to-follow instructions.

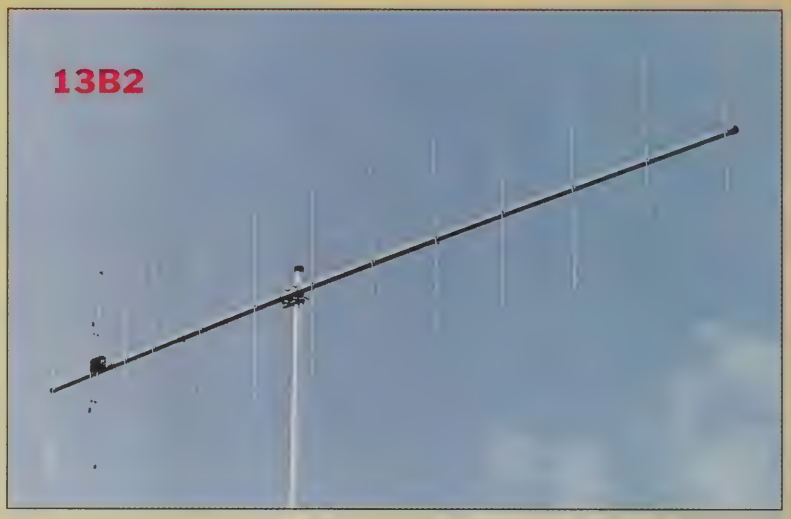
For 70 cm, the always popular A430-11S has been re-designed with all stainless steel hardware.

MODEL	A144-7S	A148-10S	A430-11S
Frequency	144-146	144-148	430-435
No. Elements	7	10	11
Forward Gain, dBd	11.1	13.2	13.2
Front to Back Ratio, dB	20	24	20
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	≥4	>10
Power, Watts PEP	1000	1000	350
3dB Beamwidth, Deg.			
E Plane	46	40	38
H Plane		46	
Boom Length, ft (m)	8.2 (2.5)	12 (3.6)	4.7 (1.40
Longest Element, in (cm)	40 (101.6)	40.3 (102.4)	14 (35.5)
Turning Radius, ft (m)	4.9 (1.5)	6 (1.8)	2.6 (.81)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.1-3.8)
Wind Load, ft^2 (m^2)	0.81 (0.08)	1.21(0.11)	0.42 (.04)
Weight, lb (kg)	4 (1.8)	6 (2.7)	3 (1.4)

1¼, 2 Meters

13B2 - 13 Element Wideband

Boomer evolution continues with the 13B2. This new design is lighter weight, lower profile and has more gain and a cleaner pattern. New technicians and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband. 13B2 is easily mounted vertically for greatest FM distance and enjoyment. Its optimum boom length makes it a popular antenna that fits almost anywhere. The new balanced UltraMatch provides a 50 Ohm UHF connector for easy feedline attachment. Stronger performance in the 215WB tradition will be yours with the 13B2.



124WB - 4 Element Wideband

This is the right choice for packet systems and other applications requiring a dedicated directional antenna.

All of these antennas give you hot performance with light weight and minimum windload. Stainless steel hardware, solid rod elements and hard drawn aluminum tubing assure you that the antenna will last.

MODEL	124WB	13B2	26B2
Frequency, MHZ	144-148	144-148	144-148
No. Elements	4	13	26
Forward Gain, dBd	10.2	15.8	18.8
Front to Back Ratio, dB	19	26	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>4	>4
Power Rating, Watts PEP	2000	2000	2000
3dB Beamwidth, Degrees			
E Plane	60	2x18	2x18
H Plane	88	2x19	2x9.5
Side Lobe Attenuation,			
dB, E Plane	40	>60	>60
Boom Length, ft (m)	4 (1.22)	15 (4.57)	15 (4.57)
Electrical Wavelength	.5	2.2	2.2
Longest Element, in (cm)	40.75 (104)	39.75 (101)	39.75 (101)
Turning Radius, ft (m)	4 (1.22)	8.9 (2.7)	10.4 (3.18)
Mast Size Range, in (cm)	1.25-2	1.5-2	1.5-2
	(3.2-5.1)	(3.8-5.1)	(3.8-5.1)
Wind Load, ft^2 (m^2)	.34 (.034)	1.8 (.17)	4.84 (.45)
Weight, lb (kg)	3 (1.36)	6.7 (.31)	21.5 (9.75)

224WB/225WB - 220 MHz Widebands

Perfect for the novice phone band and other 220 MHz operation.

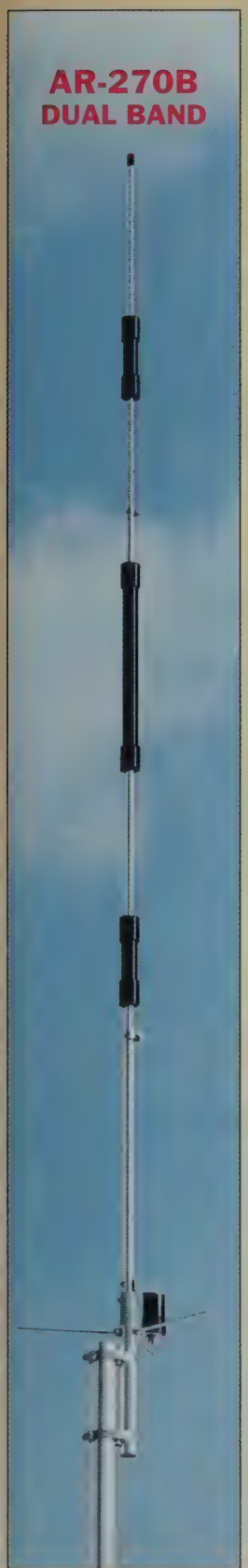
MODEL	224WB	225WB
Frequency, MHZ	222-225	222-225
No. Elements	4	15
Forward Gain, dBd	10.2	15.5
Front to Back Ratio, dB	24	24
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>5	>5
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	60	2x17
H Plane	88	2x19
Side Lobe Attenuation,		
dB E Plane	40	60
Boom Length, ft (m)	3 (.91)	10 (3.05)
Electrical Wavelength	0.5	2.2
Longest Element, in (cm)	26.7 (68)	26.3 (67)
Turning Radius, ft (m)	3 (.91)	5.8 (1.78)
Mast Size Range, in (cm)	1.25-2	1.25-2
	(3.2-5.1)	(3.2-5.1)
Wind Load, ft^2 (m^2)	.23 (.021)	.95 (.09)
Weight, lb (kg)	1.7 (.77)	5.25 (2.4)

26B2 - 26 Element Wideband

This antenna offers the highest gain of any 2 meter FM antenna in the world. Select the 26B2 when you need to work repeaters or simplex over extreme distances.

70 CM, 2 Meters

Cushcraft brings you the leading edge of dual band technology with new 70cm/2m products - The All-American Dual Bander, a high performance fiberglass base antenna, the long range AR-270B and the CS-270M mobile mag-mount. These great products will complement our already proven AR-270 dual band compact base antenna.



AR-270B 5.5/7.5 dB Dual Band Ringo

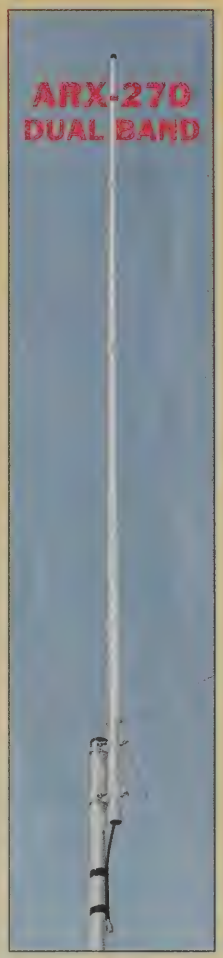
This all new model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR-270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadbanded for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

MODEL	AR-270		AR-270B	
Frequency, MHz	144-148	430-450	144-148	430-450
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	>4	>15	>4	>15
Gain, dB	3.7	5.5	5.5	7.5
Power, Watts FM	250	250	250	250
Horizontal Radiation Pattern, Degrees	360	360	360	360
Height, ft, (m)	3.75 (1.13)		7.7 (2.3)	
Mast Size Range, in	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Radial Length, in (cm)	6.75 (17.1)		20 (51)	
Wind Load, ft2 (m2)	0.27 (0.03)		0.47 (0.044)	
Weight, lb (kg)	2 (0.9)		2.4 (1.09)	

All-American Dual Band Ringo

Cushcraft's new ARX-270 high performance fiberglass base antenna yields a gain of 9 dB on VHF and 12 dB on UHF. Our exclusive non-metallic UV stabilized couplings result in the cleanest pattern of any dual band antenna. The radome is bright white, thick-wall fiberglass that will survive 90 mph winds. The three section design allows easy assembly and is U.P.S. shippable. Our sleek extruded base clamps eliminate vibration and they look great. Professional features like the factory installed pigtail feed and choice of UHF or N connector makes weather-proof connections easy. These technical innovations put the ARX-270 miles ahead. The All-American Dual Bander comes factory tuned and does not require any adjustments. The ultimate in dual-band FM enjoyment can be yours with the ARX-270.

- **ARX-270U** with UHF connector
- **ARX-270N** with N-connector

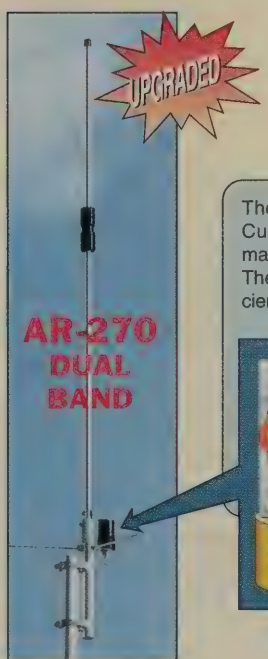


Experience the performance and appearance advantages of all-aluminum dual band antennas. Both models incorporate Ringo Ranger technology in lightweight and durable designs with stainless steel hardware. Their weather-sealed phasing coils and base matching networks eliminate stray RF currents while providing a very low angle of radiation. A simple 50 Ohm cable connection is all you need to experience the full performance of your dual band 2m/70cm transceiver.

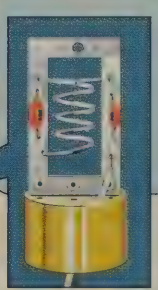
AR-270 3.7 / 5.5 dB Dual Band Ringo

The "Dual Wonder" AR-270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm base antenna.

Mount it anywhere from table top to roof top. You'll enjoy the performance.



The matching network coils for all Cushcraft dual band antennas are made from a very tough copper alloy. They're silver plated for greatest efficiency. The entire matching network is built on a PC board that surrounds the coil assuring that the antenna will not detune and will operate at peak efficiency for many years.



MODEL	ARX-270U/N	
Frequency, MHz	144-148	430-450
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>20
Gain, dB	9	12
Power Rating, Watts FM	200	200
Horizontal Radiation Pattern, Degrees	360	360
Height, ft, (m)	16.5 (5)	
Mast Size Range, in	1.25-2 (3.2-5.1)	
Radial Length, in (cm)	20.5 (52.1)	
Wind Load, ft2 (m2)	0.95 (0.088)	
Weight, lb (kg)	5 (2.3)	

NEW CS-270M

70 CM/2 M Mobile

The CS-270M offers the most gain possible in its compact size. It has 6 dB on 440 and 3.7 dB on 2 meters all in a 36-1/2" tall design. The small coil is insert molded into the center of the radiator. No moisture can penetrate the coil with this technique. The magnetic mount features a clinging 90 pound pull and a roof-protecting rubber pad. The feed line is double shielded Teflon® UltraLink Cable.™ Its low-loss, high temperature and designed to last. The CS-270M has all of the features you will need in a dual-band mobile antenna.

70 CM, 1¼, 2 Meters

Our Ringos are Number One.

Tough performers at a good price! The Ringo family of dependable, cost-effective antennas has served more hams - from novice to veteran extra - than any other amateur antenna made. Simple, straightforward design, light weight and quick, easy installation make the durable Ringo family right for you.

Ringo's top performance and low cost mean more dB per dollar - an equation anyone can appreciate.

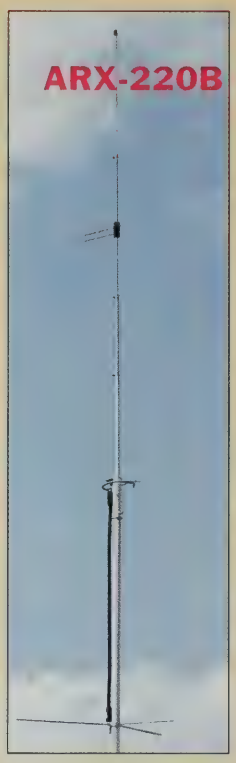
Ringo Ranger II

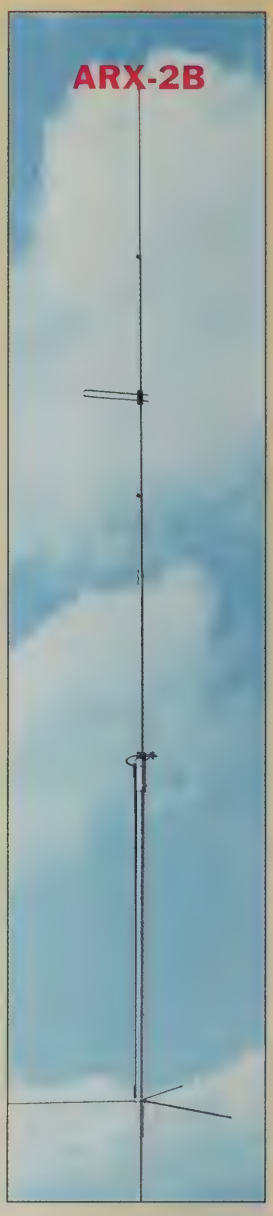
Our Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original W1BX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area.

The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance. The ARX-450BN has all the features of the standard antenna plus N-connector.

Ringo Ranger II. It's the performer. Over 500,000 have been sold!

MODEL	ARX-2B	ARX-220B	ARX-450B
Frequency, MHz	135-160	222-225	435-450
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	>5	>10
Gain, dB	7.0	7.0	7.0
Power Rating, Watts FM	1000	500	500
Radiation Angle, Deg.	7	7	7
Horizontal Radiation			
Pattern, Degrees	360	360	360
Ring Diameter, in (cm)	5 (12.7)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	.75 (1.9)	.50 (1.2)
Height, ft, (m)	14 (4.3)	9.3 (2.8)	4.9 (1.5)
Mast Size Range, in (cm)	1.0-1.25 (2.54-3.1)	1.0-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Radial Length, in (cm)	20.5 (52.1)	13.75 (33.7)	6.75 (17.1)
Wind Load, ft^2 (m^2)	0.5 (0.05)	0.3 (0.03)	0.2 (0.02)
Weight, lb (kg)	6 (2.7)	5 (2.3)	1 (.45)





Some hams comment on the ARX-2B:
"Since I put this antenna up I have received many compliments on the improvement of my signal." (N3LHP)

"The only antenna I ever installed that worked like it should the first time." (N7PGH)

"ARX-2B is a good antenna for my use on 2 meters FM...Several on the air in my area." (N9OPL)

"ARX-2B...the best antenna." (XE2CLB)

A270-10S
10 dB Dual Band Yagi

Increase your range by using the new Cushcraft A270-10S dual band Yagi on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting while reducing interference and increasing signal strength when receiving. The A270-10S is the perfect Yagi for packet applications. It will increase throughput while helping to eliminate retries and disconnects.

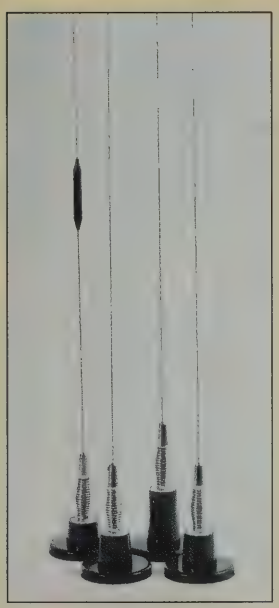
The A270-10S was designed for the ham who wants the gain and directional characteristics of a beam and the convenience of a single antenna. This new antenna covers all of 2 meters and the 430-450 MHz band. One antenna with one feedline saves both money and tower space. It can easily be turned with a light duty rotor. Assembly is a snap with our well illustrated instruction manual. Contact your dealer today and enjoy the pleasures of dual band Yagi performance.

MODEL	A270-10S	
Frequency, MHZ	144-148	430-450
No. Elements	5	5
Forward Gain, dBd	10	10
Front to Back Ratio, dB	20	18
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	≥4	≥10
Power Rating, Watts PEP	350	350
3dB Beamwidth, Degrees		
E Plane	52	52
H Plane	60	60
Boom Length, ft (m)	6.17 (1.9)	
Longest Element, in (cm)	40.3 (102.4)	
Turning Radius, ft (m)	6 (1.8)	
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	
Wind Load, ft^2 (m^2)	.725 (.07)	
Weight, lb (kg)	1.8 (.81)	

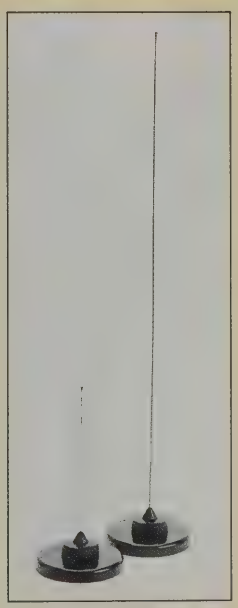
70 CM, 1¼, 2, 6, 10 Meters

Cushcraft/Signals mobiles offer the high performance that you need for consistent and mobile communications such as commuting and public service activities. These antennas are the choice of hams and communications professionals around the world who demand high quality, premium products.

SEE YOUR LOCAL DEALER'S CUSHCRAFT MOBILE DISPLAY



GAIN MOBILE ANTENNAS

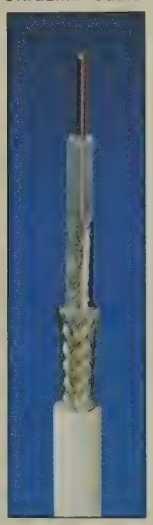


QUARTERWAVE MOBILES

BLACK MAG MOUNT

TRUNK LIP MOUNT

UltraLink Cable™



UltraLink™ Cable

Cushcraft UltraLink cable was designed specifically for high efficiency commercial mobile applications to 900 MHz. UltraLink's RG-58 size allows easy installation through the tightest openings, while its Teflon® dielectric provides the highest temperature tolerance to handle vehicle hot-spots that would melt other dielectric materials. Additional 100% shielding is provided by a jacket of easy-peel foil. All this is covered by 97% braid for easy, secure connector attachment. More of your signal will get through with UltraLink than with any other mobile cable.

CS28M Ten Meter Mag-Mount

Work a new country while you wait for the light to change. Introduced just last year, the CS28M ten meter mag-mount has become a constant companion to today's popular 10 meter multimode mobile rigs. The CS28M comes complete, ready to go with a 49" stainless steel whip and spring and a Euro-Style black poly-coated 90 pound pull magnet. A heavy rubber pad protects your car's finish; twelve feet of Cushcraft's own UltraLink™ low-loss cable (specifically designed for commercial mobile applications to 900 MHz) and PL-259 connector are included with the CS-28M.

Gain and Quarterwave Mobile Antennas

Cushcraft's years of commercial and amateur experience apply cutting-edge designs to consistently high quality materials to produce the best mobile antennas you can buy.

All inductors (and even the coil contacts) are silver plated for better RF conductivity, and all Cushcraft mobile hardware is brass to prevent the seizing inherent with inferior, dissimilar-metal joints. All Cushcraft mobile coil housings are ABS, impervious to temperature changes and ultraviolet radiation. Brass base threads, ultrasonically welded into coil housings, eliminate premature failures associated with inferior fastening techniques, and Cushcraft insert-molded 440 MHz phasing coils assure weather-tight integrity. Only Cushcraft mobile antenna mounts are entirely 50 Ohms, eliminating lossy "VSWR bumps" common in many well known designs. Cushcraft quarter-wave models (CS1147 and CS1450) are broadband, require no tuning and include UltraLink™ low loss cable.

Magnetic Mounts

Cushcraft mag-mounts stay where you put them. Our 90 pound pull magnets are the strongest you'll find. Euro-style black poly finish protects against rust, and a tough rubber pad gives maximum protection to your vehicle's finish. Ultra-Link™ cable on all Cushcraft mobile antennas means more of your signal reaches your antenna every time you key the mike.

NEW CS-270M Dual-Band Mobile

See page 10 for a full description of this new 70cm/ 2 meter mag-mount mobile.

Model No.	Frequency MHz	Whip Length in	Whip Length m	Description
CS-270M	144-148/440-450	34	.86	Magnetic
CS-270A	144-148/440-450	34	.86	Coil & Whip
CS-147M	144-174	49	1.25	Magnetic
CS-147T	144-174	49	1.25	Trunk Lip
CS-147	144-174	49	1.25	3/4" Hole
CS-147A	144-174	49	1.25	Coil & Whip
CS-1147M	144-148	20	.5	Magnetic
CS-220M	222-225	33	.84	Magnetic
CS-220T	222-225	33	.84	Trunk Lip
CS-220	222-225	33	.84	3/4" Hole
CS-450M	435-470	29.5	.75	Magnetic
CS-450T	435-470	29.5	.75	Trunk Lip
CS-450	435-470	29.5	.75	3/4" Hole
CS-1450M	430-450	7	.17	Magnetic
CS-50M	46-54	49	1.25	Magnetic
CS-50T	46-54	49	1.25	Trunk Lip
CS-50	46-54	49	1.25	3/4" Hole
CS-28M	28-30	49	1.25	Magnetic

70 CM, 1¼, 2, 6, 10 Meters

Ringo

These are the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors.

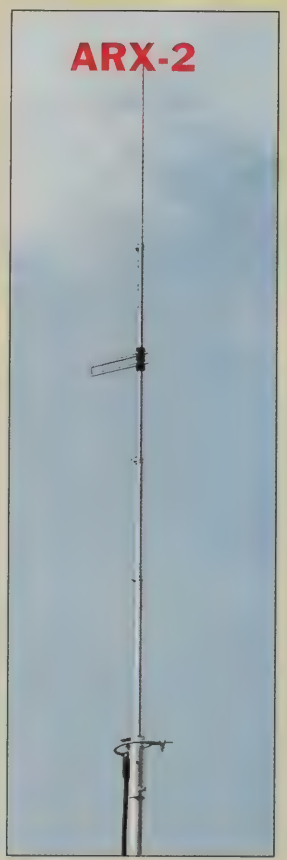
Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

MODEL	AR-2	AR-6	AR-10	AR-220	AR-450
Frequency, MHz	135-160	50-54	28-29.7	222-225	440-460
SWR 1.2:1 Typical					
2:1 Bandwidth, MHz	10	2	>1.5	10	20
Gain, dB	3.75	3.75	3.75	3.75	3.75
Power Rating, Watts FM	1000	1000	1000	500	500
Radiation Angle, Deg.	16	16	16	16	16
Horizontal Radiation Pattern, Degrees	360	360	360	360	360
Ring Diameter, in (cm)	5 (12.7)	13 (33)	13 (33)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in(cm)	.75 (1.9)	1 (2.5)	1 (2.5)	.75 (1.9)	.5 (1.3)
Height, ft, (m)	3.9 (1.2)	10.1 (3.1)	17.6 (5.36)	2.6 (.78)	1.4 (.43
Mast Size Range, in (cm)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Wind Load, ft^2 (m^2)	.21 (.02)	.37 (.03)	1.68 (.16)	.21 (.02)	.1 (.01)
Weight, lb (kg)	1.5 (.68)	2.5 (1.1)	4 (1.8)	1.2 (.55)	1 (.45)

Ringo Ranger (ARX-2)

This is the antenna that combines good gain with compact size. If space does not allow extra height or decoupling radials, then the ARX-2 is for you.

Gain 5.5 dB, frequency range 135-160 MHz, SWR 2:1 bandwidth greater than 6 MHz, length 112" (2.8 m), wind area .33 ft^2 (.03m^2), mast size range 1"-1.25" (2.54-3.1 cm), weight 4 lbs (1.8 kg), power handling 1000 Watts.



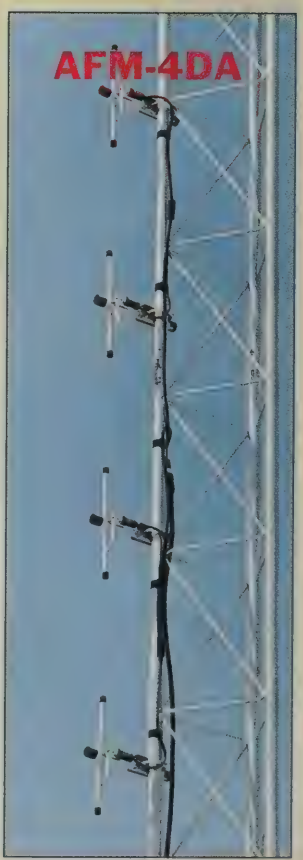
Four Pole Arrays

Cushcraft's four 1/2 wave dipole array is perfect for your repeater or as a powerful base antenna.

Strong through-the-boom dipole mounting ensures long life and superior electrical characteristics.

The dipoles mount to your tower's legs or on a separate support mast (not included). They can be arranged for omni or elliptical patterns.

MODEL	AFM-4DA	AFM-24DA	AFM-44DA
Frequency, MHz	144-148	222-225	435-450
Gain, dBd	9 Offset 6 Omni	9 Offset 6 Omni	9 Offset 6 Omni
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>5	>15
Power Rating, Watts FM	500	500	250
Radiation Angle Degrees	6	6	6
Horizontal Radiation Pattern, Degrees	360-Variable	360-Variable	360-Variable
Height, ft (m)	23 (7.0)	15 (4.5)	8 (2.4)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.1)	1.5-2.0 (3.8-5.1)	1.25-2.0 (3.2-5.1)
Wind Load, ft^2 (m^2)	2.54 (.24)	1.85 (.17)	1.13 (.11)
Weight, lb (kg)	7 (3.2)	6 (2.7)	5 (2.3)



70 CM, 2 Meters

Performance and Value Leaders

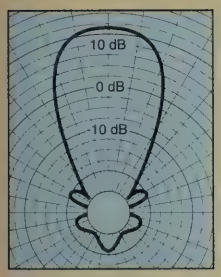
A148-10S and A148-3S are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain of these antennas to give you better FM coverage. They have direct 50 Ohm Reddi-Match with SO239 connector and stainless steel hardware.

A148-3S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted.

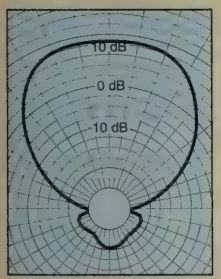
A148-10S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation.

For even higher gain the all new A148-20S is a complete antenna array with two ten element Yagis, stacking frame, harness and stainless steel hardware.

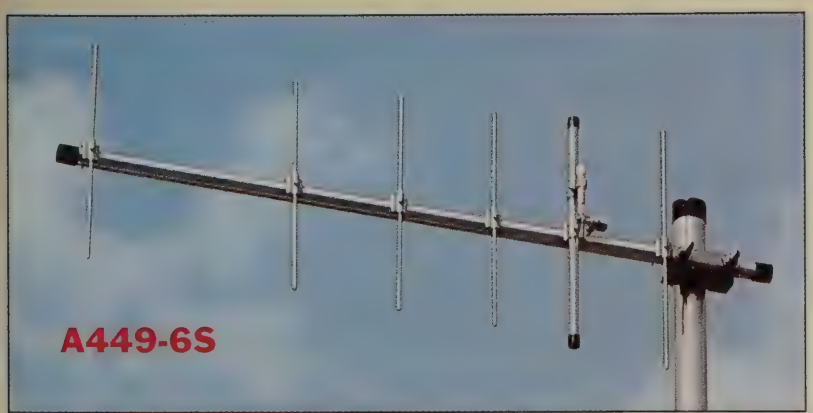
Model	A148-3S	A148-10S	A148-20S
Frequency, MHz	144-148	144-148	144-148
No. Elements	3	10	20
Forward Gain, dBd	7.8	13.2	16.2
Front to Back Ratio, dB	25	24	24
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>5	≥4	≥4
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	66	40	20
H Plane	108	46	46
Boom Length, ft (meters)	2.8 (.85)	12(3.6)	12 (3.6)
Longest Element, in (cm)	41 (104.1)	40.3 (102.4)	40.3 (102.4)
Turning Radius, ft (m)	2.8 (.8)	6 (1.8)	6.6 (2.0)
Mast Size Range, in (cm)	1.25-2.0 (3.2-5.1)	1.25-2.0 (3.2-5.1)	1.25-2.0 (3.2-5.1)
Wind Load, ft^2 (m^2)	0.27 (0.02)	1.21 (0.11)	2.82 (0.26)
Weight, lb (kg)	1.5 (0.7)	6 (2.7)	15 (6.8)



A148-10S



A148-3S



MODEL	A449-6S	A449-11S
Frequency, MHz	440-450	440-450
No. Elements	6	11
Forward Gain, dBd	10.5	13.2
Front to Back Ratio, dB	18	20
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>10	>10
Power Rating, Watts PEP	350	350
3dB Beamwidth, Degrees		
E Plane	60	48
Boom Length, ft (m)	2.9 (0.89)	4.2 (1.35)
Longest Element, in (cm)	13 (33)	13 (33)
Turning Radius, ft (m)	2.9 (.89)	2.8 (.85)
Mast Size Range, in (cm)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.2-3.8)
Wind Load, ft^2 (m^2)	0.30 (0.03)	0.39 (0.04)
Weight, lb (kg)	3 (1.4)	4 (1.8)

Stacking Kits

Our VPK stacking kits for the antennas above are supplied complete with mounting boom, harness, and hardware.

Antenna	Frequency MHz	Complete Kit	Harness Only
A148-3S	144.5-148	A14-VPKS	A14-SK
A148-10S	144.5-148	A148-VPKS	A148-SK
A449-6S	440-450		A449-SK
A449-11S	440-450	A449-VPKS	A449-SK

70 CM, 2 Meters

cushcraft CORPORATION

NEW AOP-2

Reliable satellite communications will be yours with the new Cushcraft OSCAR pack, AOP-2. The OSCAR pack consists of the latest designs for 2M (22XB) and 70 CM (738XB) circularly polarized Boomer antennas. Complete details about these new designs are below. Mount them on your cross-mounting boom and you'll be on the air immediately. The AOP-2 also includes complete instruction on the mounting and installation of your OSCAR antenna system.

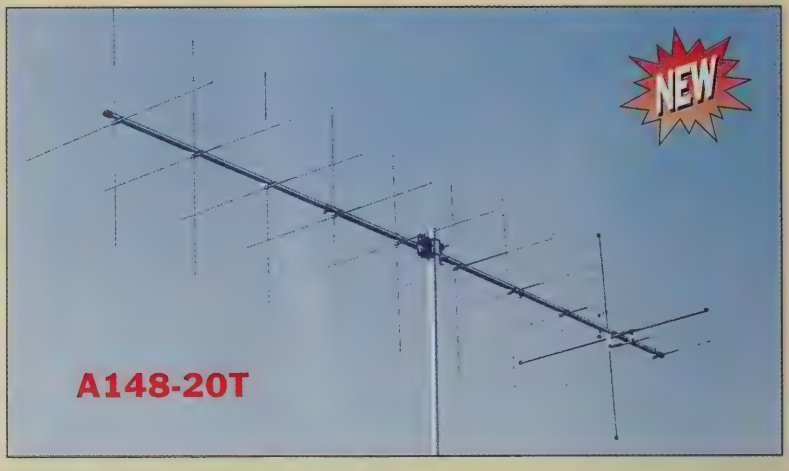
NEW 22XB 2M OSCAR

Stronger signals will link your station with the satellite of your choice. Cushcraft's new 22XB OSCAR Boomer gives you the excellent performance that hams around the world have experienced with the Boomer antenna series. Clean patterns, 14 dBdc gain, superb circularity, and rugged construction are all part of the package. The polarity relay to switch from right to left circular polarization is included. These new designs are resistant to changes brought about by the weather. Construction of the 22XB features all stainless steel hardware. The boom is an extra rugged 1-1/2" diameter 6063-T832 aluminum alloy. Aim your new 22XB at the satellite and you'll be enjoying OSCAR at its best.

NEW 738XB 70 CM OSCAR

Computer aided design and superior engineering are combined to make 738XB the finest 70 CM OSCAR antenna available. The longer boom means more gain. Thirty-eight optimally spaced elements on a rugged 14.3 foot boom mean 15.5 dBdc of gain for your station. Easily overcome the QRM and be on your way to more successful QSO's. Excellent ellipticity means that as the satellite rotates your signals will stay steady. Cushcraft's 738XB features a built-in polarity switcher. All stainless steel hardware, the rugged 6063-T832 aluminum boom, and the weather-sealed polarity switch all add up to the best choice for the serious OSCAR operator. Assemble a winning station by choosing Cushcraft satellite antennas.

MODEL	22XB	738XB
Frequency, MHz	144-148	432-438
No. Elements	22	38
Forward Gain, dBdc	14	15.5
Front to Back Ratio, dB	25	25
Ellipticity dB at boresight	2	2
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	4	6
Power Rating, Watts PEP	600	250
3dB Beamwidth, Degrees		
E Plane	30	24
Boom Length, ft (m)	19.33 (5.9)	14.33 (4.37)
Longest Element, in (cm)	39.19 (99.6)	13.94 (35.4)
Turning Radius, ft (m)	11 (3.35)	8.5 (2.6)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.0)	1.5-2.0 (3.8-5.0)
Wind Load, ft^2 (m^2)	2.6 (.24)	1.4 (.13)
Weight, lb (kg)	11 (5)	7.6 (3.5)
Polarity switch	Included	Included



NEW A148-20T 2 Meter Hi-Lo Cross Yagi

Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBd gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel.

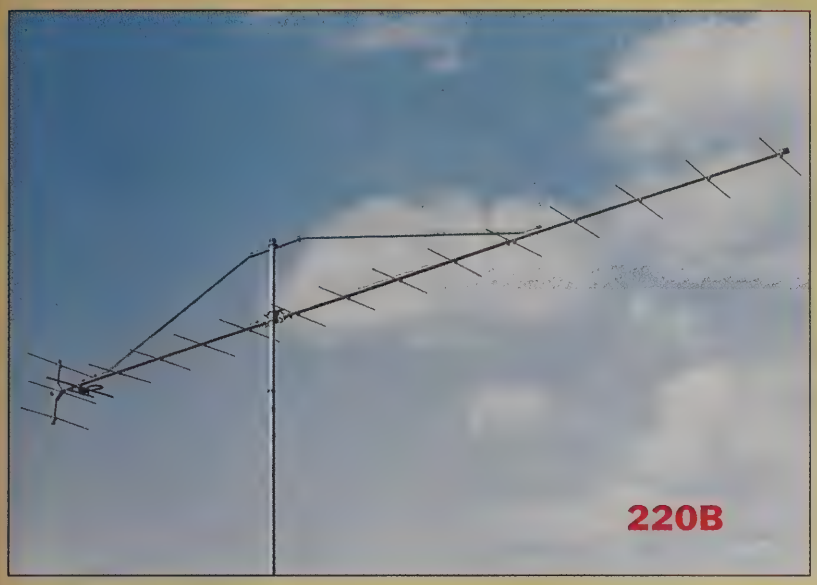
A148-20T has a boom length of 130 in. (3.3m), longest element length of 40 in. (1.0 m), wind area of 1.42 ft^2 (.13m^2), and a mast size of 1.25-1.5 in. (3.2-3.8 cm)

COMMITTED TO INNOVATION

Innovation is the Cushcraft goal established by our founder, Les Cushman, W1BX. It is in this spirit that we have created many new and exciting products for amateur radio. Our innovative designs include the first coaxial lightning arrester, Ringo Rangers, Squalo HF and VHF omni antennas plus the pioneering A147-11 and A147-22 VHF FM antennas. Using the newest technology we have produced Boomer and Skywalker computer design Yagis, the R3, R4, R5 and R7 vertical antennas, the all new ASL2010 Skylog and AOP-2 OSCAR pack.

The engineering hams and manufacturing staff at Cushcraft are committed to continual upgrading of existing designs. While many improvements do not qualify for new product status, they do enhance the value of products which we offer to you.

70 CM, 1¼, 6 Meters



1-1/4 Meters

We took the features of our 2 meter antennas and incorporated them into a high-gain 1-1/4 meter antenna that is perfect for this fast growing band. You will have more fun with Cushcraft!

MODEL	220B
Frequency, MHz	222-223
No. Elements	17
Forward Gain, dBd	17.2
Front to Back Ratio, dB	30
SWR 1.2:1 Typical	
2:1 Bandwidth MHz	>2
Power Rating, Watts PEP	2000
3 dB Beamwidth, Degrees	
E Plane	2 x 13
H Plane	2 x 14
Side Lobe Atten., dB, E Plane	60
Boom Length, ft (m)	19 (5.8)
Electrical Wavelength	4.2
Longest Element, in (cm)	26 (66.2)
Turning Radius, ft (m)	9 (2.64)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)
Wind Load, ft^2 (m^2)	2.6 (.24)
Weight, lb (kg)	10.5 (4.77)

6 Meters

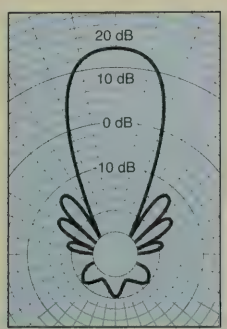
Our 617-6B has more gain than any antenna in its class! The serious 6 meter operator will appreciate the features of this great performing Boomer. Find out for yourself.

70 CM

The contest winner! The 424B will keep you at the top of the charts. Through-the-boom insulated elements, precise spacing, and high efficiency reflector systems are the features that make our 70 cm antennas the right choice for every ham. The 424B has an eye-opening 18.2 dBd forward gain for the ultimate in 70 cm enjoyment.

These boomers are equipped with stainless steel hardware, UV stabilized insulators, teflon® dielectric coaxial balun, seamless heavy-wall booms, and 50 Ohm N connector.

Equip yourself for fun and challenge of 70 cm with a Cushcraft Boomer!



TYPICAL RADIATION PATTERN

MODEL	617-6B	424B
Frequency, MHz	50-51	424-435
No. Elements	6	24
Forward Gain, dBd	14.0	18.2
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	>1	>12
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 19	2 x 9.5
H Plane	2 x 20	2 x 11
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	34 (10.36)	17.4 (5.3)
Electrical Wavelength	1.7	7.6
Longest Element, in (cm)	117 (297.2)	13 (33.8)
Turning Radius, ft (m)	17.7 (5.39)	10 (3.05)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft^2(m^2)	4.8 (.45)	2.3 (.21)
Weight, lb (kg)	26 (11.79)	4.5 (2.05)

Fast Acting Gas Discharge Lightning Arresters

Protect your valuable equipment from surges of up to 5,000 amperes with a Cushcraft constant impedance LAC4 arrester! The LAC4 has a replaceable gas discharge tube which clamps voltage surges to less than 50 volts in about 100 nanoseconds-much quicker than the voltage rise time of lightning.

You cannot afford to be without lightning protection. One of the models below is right for your shack.

LAC4	200 Watt with UHF SO-239 connectors
LAC4H	2 kW with UHF SO-239 connectors
LAC4N	200 Watt with N connectors
LAC4NH	2 kW with N connectors
LC2	200 Watt replacement cartridge
LC2KW	2 kW replacement cartridge

Blitz Bug Lightning Arresters

Cushcraft also recommends this well-known series of arresters which are based on a patented three point static discharge design. The Blitz Bug has a sealed air chamber, constant static drain, and controlled voltage discharge.

The Blitz Bug is rated at 2 kw PEP to 500 MHz with negligible insertion loss.

LAC-1	with UHF PL-259 and SO-239 connectors
LAC-2	with UHF SO-239 connectors

Power Dividers For Boomers

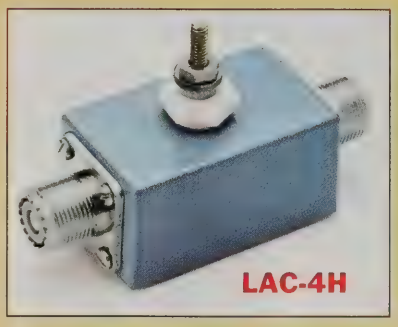
Our power dividers make it a snap to stack Cushcraft Boomers. Models for 17B2 have N-connectors. They are available for these antennas:

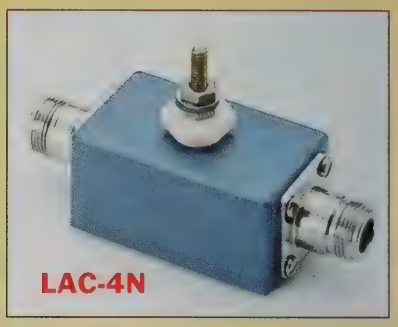
PD-2	for two 13B2, 124WB
PD-2N	for two 17B2
PD-4	for four 13B2
PD-4N	for four 17B2
PD-222	for two 220B, 224WB or 225WB
PD-224	for four 220B, 224WB or 225WB

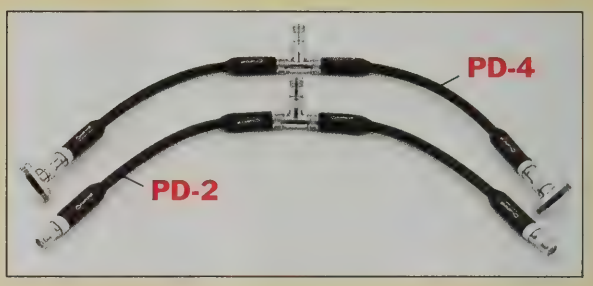
Stacking Harnesses For Boomers

For even easier installation of our Boomers, use our installation kits that are complete with harness and power divider. Models for 17B2 have N-connectors.

617-SK	for two 617-6B's
22-SK	for two 13B2's
22N-SK	for two 17B2's







One year warranty backed by our 40 years of antenna experience.

Cushcraft antennas are designed to survive 80 mph (129 kph) winds.

For safe antenna installations, avoid contact with powerlines.

The use of lightning arresters is highly recommended.

Stainless steel hardware and high grade seamless 6063-T832 tubing used in all antennas.

Support mast, feedline and RF chokes are not included with antennas.

Specifications are subject to change without notice.

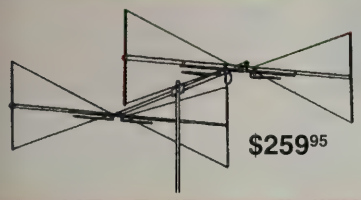
All Cushcraft antennas are available through dealers worldwide.

BOOMER STACKING INFORMATION

Antenna	2x617-6B	2x13B2	4x13B2	2x220B	4x220B	2x424B	4x424B	2x17B2	4x17B2
Forward Gain, dBd	17.0	18.8	21.8	19.8	22.4	20.8	23.4	21.0	24.0
Front/Back Ratio	30	24	24	30	30	30	30	24	24
E-Plane Beamwidth,deg	2x17.5	2x18	2x9	2x13	2x6.5	2x9.5	2x4.8	2x14.5	2x7.3
H-Plane Beamwidth, deg	2x10	2x9.5	2x9.5	2x7	2x5.5	2x5.5		2x7.5	2x7.5
Vert, ft	26	9.2	9.2	8	8	5	5	11.5	11.5
(m)	7.92	2.8	2.8	2.44	2.44	1.97	1.97	3.5	3.5
Horiz, ft	-	-	9.6	-	8.5	-	5.5	-	12
(m)	-	-	3.0	-	2.59	-	2.16	-	3.7
Approximate Wt, lb	62	22	44	23	76	15	55	32.5	115
(kg)	28.12	10.00	20.00	10.40	34.40	7.62	24.95	14.8	52.3

BUTTERNUT

HF Antennas



$259.95

The HF-5B "Butterfly"™ COMPACT BEAM for 10-12-15-17-20 meters

- Unique design reduces size but not performance. • No lossy traps – the entire element radiates.
- **3dB** gain on 20 meters, up to **5dB** on 10 and 15 meters – rotary dipole performance on 17 meters.
- Boom length: 6 ft., wingspan: 12½ ft., handles 1.2 KW final input.
- 2.9 sq. ft. wind area, weighs 17 lbs, turns with TV rotor with up to 1½" mast.

Verticals

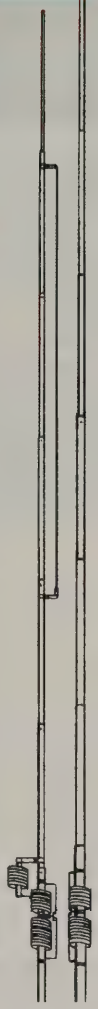
Uses Highest-Q tuning circuits (no lossy traps) to out-perform other multi-band designs of comparable

Model HF-6VX (left) • $169.95

- Automatic bandswitching on 80, 40, 30, 20, 15 and 10 meters.
- Add-on kits for 160, 17 and 12 meters
- 26 ft. tall, self-supporting, legal limit.

Model HF-2V (right) • $159.95

- Automatic 80/40 meter bandswitching, add-on units for 160 or 30 meters.
- Low Angle of radiation – great for DX!
- 32 ft. tall, self supporting, handles the legal power limit.



MFJ

MFJ -1796 1/2-wave Vertical Antenna
Ground independent–operate 40, 20, 15, 10 6 and 2 meters with no radials or ground required! Only 12 ft. high, with a 24 inch footprint – mounts anywhere! Fully automatic frequency selection, handles up to 1500 watts PEP. **$179.95**

MFJ-462 Multi Reader

An easy way to copy RTTY, ASCII, CW and AMTOR signals from commercial, military, diplomatic, weather, aeronautical, maritime, amateur, etc. Plugs into shortwave receiver earphone jack and displays messages on a two-line, 16 character LCD display. 12VDC or 110VAC with MFJ-1312B AC adapter. 5¼" x 2½" x 5 ¼" **$139.95**

AMERITRON

Remote Coaxial Switches

RCS-4 (left) • Provides convenient selection of up to four different HF antennas while using just one coaxial feed line, and no additional control cable. The weatherproof switch box locates on a tower, mast or at another remote location. The control box at your operating position switches antennas with control voltage routed directly through the coaxial cable. Rated for 1.8-30MHz and handles the legal power limit **$124.95**

RCS-8V (right) • Independently or simultaneously selects up to five different antennas using just one coaxial feedline and a single 8-wire control cable. Internal wiring allows user to ground or float unused ports as required. Rated at 5KW below 30MHz and 1KW up to 150MHz..... **$139.95**

GAMBER JOHNSON

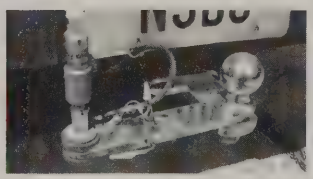
Super Slide Radio Mount

SS-100 • Convenient, avoid theft! Radio slides in and out of mount instantly – without having to attach or remove cables. Power, Ground, Antenna, and Speaker leads connect and disconnect automatically. RF components are designed for a low SWR up to 500MHz. Adapts to most radios; bracket adjusts to case and can be attached above or below radio. **$49.95**

SS-101 • Extra base available for multiple vehicle use **$29.75**

DC SALES

'Tenna Hitch'



Consists of a heat treated, high strength aluminum bracket with an insulated standard. 3/8" x 24 thread antenna mounting stud. Just install under the ball of a Class-I or Class-II trailer hitch and attach coax cable. Rugged!–handles the largest mobile antennas and does not interfere with trailer towing. No holes to drill, all hardware supplied..... **$32.95**

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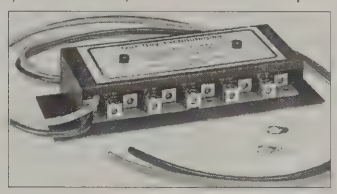
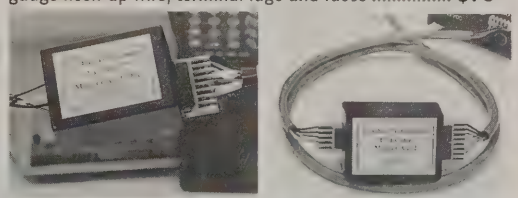
OAK BAY TECHNOLOGIES

LP-11P Commercial Grade Low Pass Filter • Installs in transmission line between HF Transmitter and power amplifier or tuner. Eliminates TVI by filtering out transmitter generated harmonics that could fall within TV bands. Eleven pole Chebishev design covers 1.8 thru 30MHz with <.5dB insertion loss, an upper cutoff frequency of 41MHz and 80dB of ultimate attenuation. 50Ω, handles 1 KW RF..... **$69.95**

AM-101B Rubber Duck Window Mount • Improves HT performance when operating mobile by getting RF out of the car. Great for emergencies, rental cars, etc. The custom stainless steel bracket slips on the top edge of car window, and the rubber duck antenna from your HT attaches to the BNC mount on the outside. Comes with 6 ft. of RG-174U coax with BNC connector. 50Ω, handles 15W, dual/twin band compatible **$24.95**



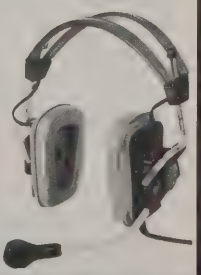
PS-101 High Current 12V Power Strip • Make just one connection to power source (battery, power supply, etc.) to distribute to multiple devices. Provides five outputs – two fused at 20A and three at 30A. Rugged screw/clamp connections. Rated to handle 50A total current. Comes with 5 ft. of #8 gauge hook-up wire, terminal lugs and fuses **$79.95**



CA-232U *Uni-Cable*™ Interface (right) • A universal Packet TNC cable that provides interfacing between popular TNCs and all popular VHF/HF transceivers. No soldering required, easily programmed by user to mate with 8-pin mic. connectors **$34.95**

CA-232HH *Uni-Cable*™ Interface (left) • Connects popular TNCs to popular handhelds that use 2.5mm and 3.5mm microphone and earphone jacks. No soldering **$34.95**

HYGAIN/TELEX 2400-155 Contester



A high quality headset and boom mounted noise canceling microphone combination with 100-8000Hz response for maximum QSO intelligibility. The boom rotates and can be worn on either side, and the mic automatically shuts off when placed upright. Dynamic headphones have comfortable foam cushions with removable washable socks **$74.95**

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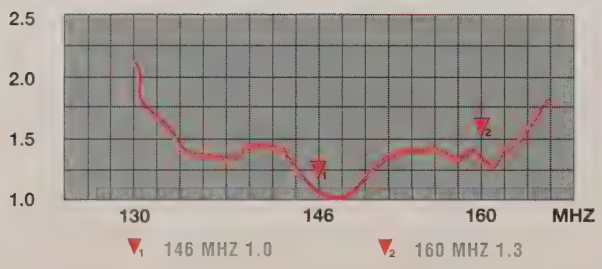
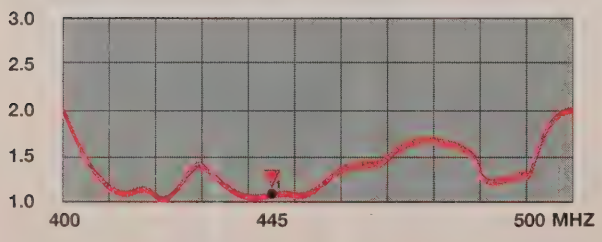
VSWR



▼1 146 MHZ 1.0 ▼2 160 MHZ 1.3

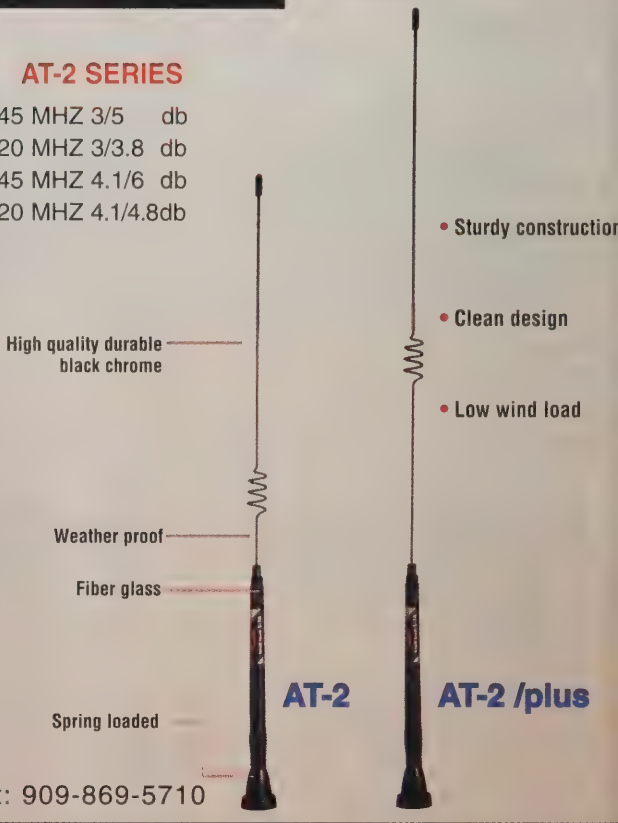


▼1 445 MHZ 1.1

[US patent pending]

AT-2 SERIES

AT-2	146 / 445 MHZ 3/5	db
AT-2A	146 / 220 MHZ 3/3.8	db
AT-2 plus	146 / 445 MHZ 4.1/6	db
AT-2A plus	146 / 220 MHZ 4.1/4.8	db



ANLI Antenna

20277 Valley Blvd #J Walnut, CA 91789 Tel: 800-666-ANLI Fax: 909-869-5710

ANLI Antenna

POWER STATION

Provides Power To:

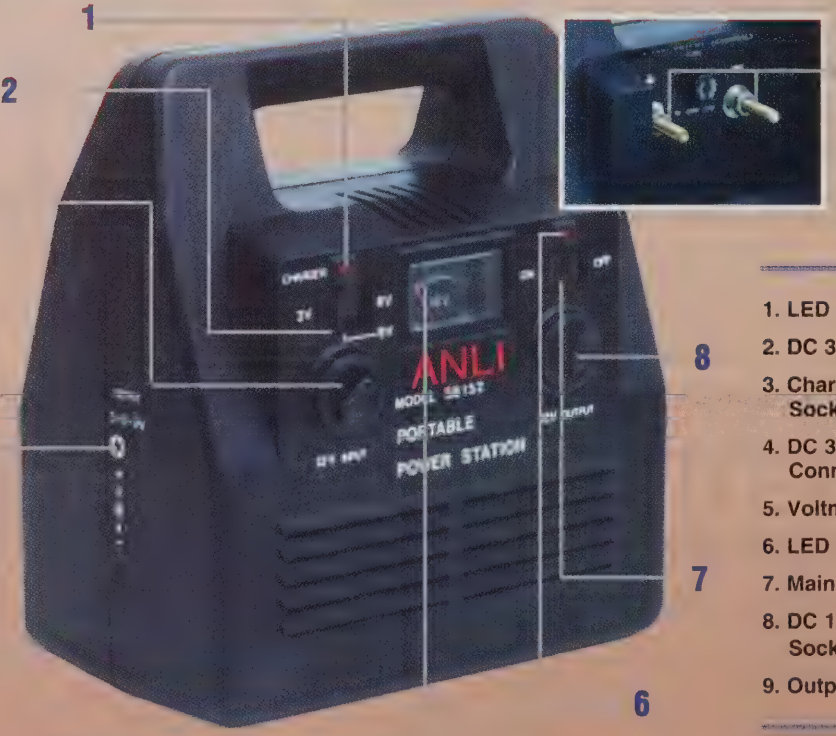
- Cellular telephones / Communication radios
- Boost charge 12 VOLT batteries
- Camcorders
- Portable TV's & radio / cassette players
- Re-chargeable nickel cadmium batteries

Quick Recharge

- 3hrs approx. from 12 VOLT DC sources (while driving)
- 8 hrs approx. from 110 AC 50Hz adapter provided. With automatic "full charge" shut off circuit.

Technical specifications

- Power Output - 12 VOLT DC 10 amps 120 watts. 3-6-9 VOLTS DC 650 MA.
- Recharge - 110 VOLT DC 50 Hz mains or 12 VOLT DC with fused cigarette lighter plug supplied.



1. LED Charging Indicator
2. DC 3-6-9v Selector Switch
3. Charge Input Cigarette Socket
4. DC 3-6-9v Output Connector
5. Voltmeter
6. LED Power "On" Indicator
7. Main Power On/Off Switch
8. DC 12v Output Cigarette Socket
9. Output (+ –) Terminal

ANLI Antenna

20277 Valley Blvd #J
Walnut, CA 91789
Tel: 800.666.ANLI
Fax: 909.869.5710

SB - 152 6.5AMP/HR **SB - 752 8.5AMP/HR**

ANLI
Antenna
HAM RADIO Antenna

For Hams Who Demand High Quality ...

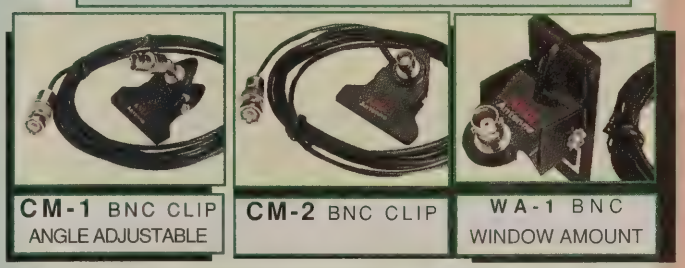
ANLI Gives You The Best of Both 144 MHz & 440 MHz

S-1 (Antenna)
WA-1 (Mount)
With the WA-1 Windows Clip Mount, You Can Mount Your H.T. (or ANLI S-1) Antenna to Your Car Window or Sunroof.

PORTABLE POWER PACK
Output : 12V 6.5 AMP & 3,6,9V
Built in Voltage Meter & AC Adapter

Hi-Quality Power Supply
Output : 13.8V. DC 5A
UL Approved

MOUNTS



CM-1 BNC CLIP ANGLE ADJUSTABLE

CM-2 BNC CLIP

WA-1 BNC WINDOW AMOUNT

MC-1 HI-Flux Magnet Mount NMO/UHF

TA-1 Angle Adgustable Trunk Mount NMO/UHF

Call your complete ANLI Dealer . . .

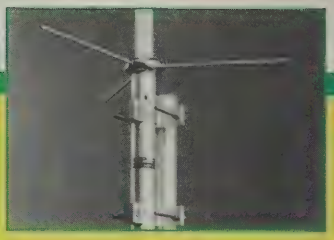
AMATEUR ELECTRONIC SUPPLY®

Check the front of the book under ANLI for a product listing and prices. Call and order for prompt shipment (usually the same day!)
For more product or technical information you can call ANLI at 1-818-369-2654.

COMET

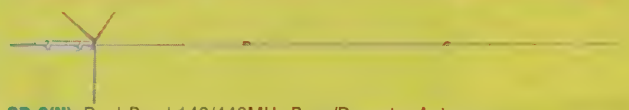
MODERN, MULTI-BAND ANTENNA SYSTEMS

BASE/REPEATER ANTENNA PRODUCTS



Featuring the COMET exclusive SLC System. The SLC actually increases the gain of the Dual/TriBand Antennas. A completely pre-formed phasing coil and phosphorous copper element produces a low-loss, highly effective, high gain antenna. All COMET antennas are pre-tuned and come complete will all mounting hardware. Simply mount to your mast and experience incredible COMET performance!

COMET DUAL-BAND



GP-9(N) Dual-Band 146/446MHz Base/Repeater Antenna

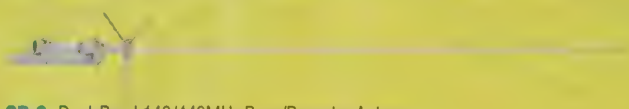
NEW!

Gain & Wave: 146MHz 8.5dBi 5/8 wave x 3 446MHz 11.9dBi 5/8 wave x 8 **VSWR:** 1.5:1 or less **Length:** 17' 8" **Max Power:** 200W PEP **Weight:** 5lbs. 11ozs.
Connector: SO-239 (GP-9), N-type (GP-9N) **Mounts to Mast Size:** 1.25"-2.50"
Construction: Heavy duty fiberglass, 3 sections, 92MPH wind survival

GP-6 Dual-Band 146/446MHz Base/Repeater Antenna

NEW!

Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 446MHz 9.0dBi 5/8 wave x 5 **VSWR:** 1.5:1 or less **Length:** 10' 2" **Max Power:** 200W PEP **Weight:** 3lbs. 8oz.
Connector: Gold-Plated SO-239 **Mounts to Mast Size:** 1.25"-2.50"
Construction: Heavy duty fiberglass, 2 sections, 112MPH wind survival



GP-3 Dual-Band 146/446MHz Base/Repeater Antenna

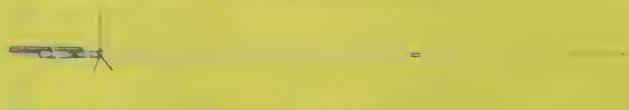
NEW!

Gain & Wave: 146MHz 4.5dBi 5/8 wave 446MHz 7.2dBi 5/8 wave x 3 **VSWR:** 1.5:1 or less **Length:** 5' 10" **Max Power:** 200W PEP **Weight:** 2lbs. 9ozs.
Connector: Gold-Plated SO-239 **Mounts to Mast Size:** 1.25"-2.50"
Construction: Single piece fiberglass, 130MPH wind survival

COMET MONO-BAND

CA-ABC23 Mono-Band 146MHz Base/Repeater Antenna

Gain & Wave: 146MHz 7.8dBi 5/8 wave x 3 **VSWR:** 1.5:1 or less **Max Power:** 200W PEP
Connector: SO-239 **Length:** 14' 12" **Weight:** 3lbs. 8 ozs.
Mounts to Mast Size: 1.25"-2.50"
Construction: Thick-wall aluminum, 3 sections, 70MPH wind survival



CA-712EF Mono-Band 446MHz Base/Repeater Antenna

Gain & Wave: 446MHz 9dBi 1/2 wave x 12 **VSWR:** 1.5:1 or less **Max Power:** 200W PEP
Connector: N-type **Length:** 10' 5" **Weight:** 2lbs. 12ozs.
Mounts to Mast Size: 1.25"-2.50"
Construction: Heavy duty fiberglass, 2 sections, 105MPH wind survival

CA-62DB Mono-Band 6 Meter FM Antenna

Gain & Wave: 52MHz 6.5dBi 5/8 wave x 2 **VSWR:** 1.5:1 or less **Max Power:** 500W PEP
Connector: SO-239 **Length:** 21' 8" **Weight:** 5lbs. 11ozs.
Mounts toMast Size: 1.25"-2.50"
Construction: Thick-wall aluminum, 5 sections, 100MPH wind survival

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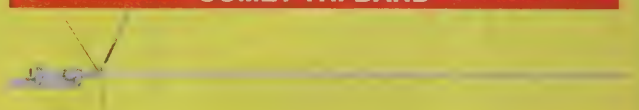
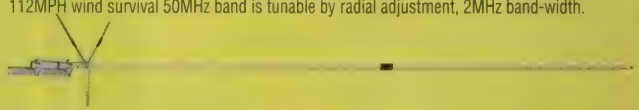
COMET TRI-BAND



GP-15 Tri-Band 52/146/446MHz Base/Repeater Antenna

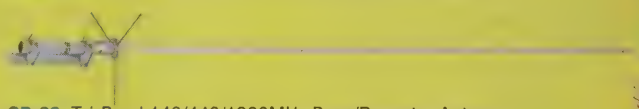
NEW!

Gain & Wave: 50-54MHz 3.0dBi 5/8 wave 146MHz 6.2dBi 5/8 wave x 2 446MHz 8.6dBi 5/8 wave x 4 **VSWR:** 1.5:1 or less **Length:** 7' 11" **Max Power:** 300W PEP **Weight:** 3 lbs. 1 oz. **Mounts to Mast Size:** 1.25"-2.50"
Connector: Gold-Plated SO-239 **Construction:** Single piece heavy-duty fiberglass, 112MPH wind survival 50MHz band is tunable by radial adjustment, 2MHz band-width.



CX-333 Tri-Band 146/223/446MHz Base/Repeater Antenna

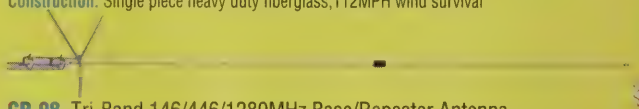
Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 223MHz 7.8dBi 5/8 wave x 3 446MHz 9.0dBi 5/8 wave x 5 **VSWR:** 1.5:1 or less **Length:** 10' 2" **Max Power:** 120W PEP **Weight:** 3 lbs. 10 ozs. **Mounts to Mast Size:** 1.25"-2.50"
Connector: Gold-Plated SO-239
Construction: Heavy duty fiberglass, 2 sections, 112MPH wind survival



GP-93 Tri-Band 146/446/1280MHz Base/Repeater Antenna

NEW!

Gain & Wave: 146MHz 4.5dBi 5/8 wave 446MHz 7.2dBi 5/8 wave x 3 1280MHz 10dBi 5/8 wave x 6 **VSWR:** 1.5:1 or less **Length:** 5' 7" **Mounts to Mast Size:** 1.25"-2.50" **Max Power:** 300W PEP (146MHz) 200W PEP (446/1.2) **Weight:** 2 lbs. 8ozs.
Connector: Gold-Plated N-type
Construction: Single piece heavy duty fiberglass,112MPH wind survival



GP-98 Tri-Band 146/446/1280MHz Base/Repeater Antenna

NEW!

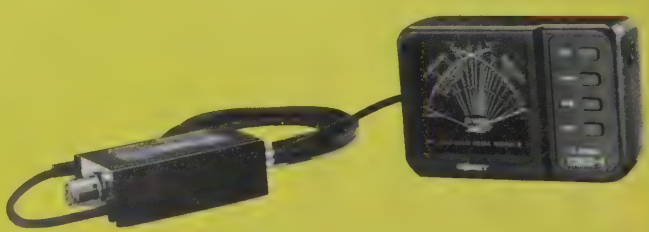
Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 446MHz 9.0dBi 5/8 wave x 5 1280MHz 13.5dBi 5/8 wave x 12 **VSWR:** 1.5:1 or less **Length:** 9' 8" **Mounts to Mast Size:** 1.25"-2.50" **Max Power:** 300W PEP (146MHz) 200W PEP (446/1.2) **Weight:** 3 lbs. 8ozs.
Connector: Gold-Plated N-type
Construction: Heavy-duty fiberglass, 2 sections, 112MPH wind survival

CROSS NEEDLE METERS

- Separate Meter and RF Sensor allows for convenient placement of the meter.
- Cross Needle Meter provides FWD, REF, and VSWR simultaneously.
- The RF-Sensor is a compact design, and has an extremely low-loss circuit.
- Beautifully illuminated when connected to power supply.
- 6 foot cable standard.
- Optional EKS-3 10 foot extension cable for a total of 16 feet between the sensor and meter.
- Compact Size: (L) 4.75" x (W) 1.75" x (H) 3.5"

CMX-1	CMX-2	CMX-3
1.8-60MHz	1.8-200MHz	140-525MHZ
0-2KW	0-200W	0-200W
30/300/2KW	20/50/200W	20/50/200W

NEW!



COMET

MODERN, MULTI-BAND ANTENNA SYSTEMS

MOBILE ANTENNA PRODUCTS

Modern, high-performance stations use COMET Antennas, Duplexers, Triplexers and Accessories! COMET products are designed to provide an exceptional level of signal quality and coverage area. Whether operating mobile or from your base station, COMET products make you sound good. No other product line has the selection, convenience, quality and performance!

DUAL-BAND MOBILE ANTENNAS

FL-67S Dual-Band 146/446MHz w/Fold-Over, No Ground Plane Required

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 4.5dBi 6/8 wave 446MHz 7.2dBi 5/8 wave x 3	1.5:1 or less	150 watts	4' 11"	Gold Plated PL-259

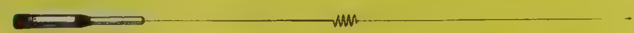
FL-62S Dual-Band 146/446MHz w/Fold-Over, No Ground Plane Required

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 3.5dBi 1/2 wave 446MHz 6.0dBi 5/8 wave x 2	1.5:1 or less	150 watts	3' 5"	Gold Plated PL-259

NEW!

SB-7/SB-7NMO Dual-Band 146/446MHz w/Fold-Over, No Ground Plane Required

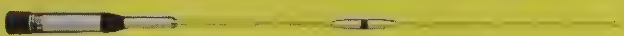
Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 4.5dBi 6/8 wave center-loaded 446MHz 7.2dBi 5/8 wave x 3	1.5:1 or less	70W FM	4' 7"	PL-259 or NMO style



NEW!

SB-5/SB-5NMO Dual-Band 146/446MHz w/Fold-Over, No Ground Plane Required

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 3.0dBi 1/2 wave 446MHz 5.5dBi 5/8 wave x 2	1.5:1 or less	120W FM	38"	PL-259 or NMO style



NEW!

SB-2/SB-2NMO Dual-Band 146/446MHz

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 2.15dBi 1/4 wave 446MHz 3.8dBi 5/8 wave	1.5:1 or less	60W FM	18"	PL-259 or NMO style

B-10/B-10NMO Dual-Band 146/446MHz, Cellular Look-a-like

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 0dBi 1/4 wave 446MHz 2.15dBi 1/2 wave	1.5:1 or less	50W FM	12"	PL-259 or NMO style

B-20/B-20NMO Dual-Band 146/446MHz, Cellular Appearance, No Ground Plane Required

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 2.15dBi 1/2 wave 446MHz 5.0dBi 5/8 wave x2	1.5:1 or less	50 watts	30"	PL-259 or NMO style

NEW!

SB-25/SB-25NMO Mono-Band 146MHz w/Fold-Over, No Ground Plane Required

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 4.1dBi 5/8 wave center loaded	1.5:1 or less	100W FM	4' 9"	PL-259 or NMO style

TRI-BAND MOBILE ANTENNAS

CX-224/224NMO Tri-Band 146/220/446MHz, w/Fold-Over, No Ground Plane Required

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
146MHz 2.15dBi 1/2 wave 220MHz 3.6dBi 5/8 wave 446MHz 6.0dBi 5/8 wave x 2	1.5:1 or less	100 watts	3'	PL-259 or NMO style

FJ-15S Tri-Band 52/146/446MHz w/Fold-Over

Gain & Wave:	VSWR:	Max Power:	Length:	Connector:
52MHz 2.15dBi 1/4 wave 146MHz 4.5dBi 6/8 wave 446MHz 7.2dBi 5/8 wave x 3	1.5:1 or less	120 W FM	4' 10"	PL-259

HF MOBILE AND HT ANTENNAS

NEW!

HA-4S Quad-Band HF 40/*(20)/15/12/10 Meters w/Fold-Over

Wave:	VSWR:	Weight:	Length:	Max Power:	Connector:
1/4 wave	2:1 or less	1 lb. 14 oz.	4' 4"	120W SSB (200W SSB 28MHz)	PL-259

*L-14HS Optional 20 Meter Coil

SH-55 Super Flexible 146/446MHz HT Antenna

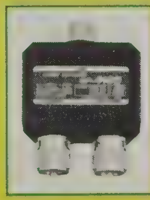
Gain & Wave:	Max Power:	Length:	Connector:
146MHz 1.5dBi 1/4 wave 446MHz 3.2dBi 5/8 wave x 2	10 watts	15.5"	BNC

NEW!

CH-722SA High Gain HT Antenna
Gain & Wave: 146MHz 3.0dBi 1/2 wave
446MHz 5.5dBi 5/8 wave x 2
Max Power: 50 watts
Length: 35", 2 sections, 18" each
Connector: BNC

CH-32 Miracle Baby 146/446MHz HT Antenna
Gain & Wave: 0dB 1/4 wave
Max Power: 10 watts
Length: 1.75"
Connector: BNC

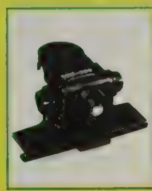
DUPLEXERS AND MOBILE MOUNTS



CF-4106K, I, J,
146/446MHz
Band Pass, Ins Loss, Max Pwr.
1.3-150MHz, 0.1dB, 800w PEP
400-540MHz, 0.2dB, 500w PEP
Isolation: 60dB
CONNECTORS:

	4160K	4160I	4160J
Output:	SO-239	SO-239	SO-239
Low In:	PL-259	PL-259	SO-239
High In:	PL-259	N-Male	SO-239

RS-21
Trunk, hatchback, rear door (van, blazer, etc.) mount. Adjustable to virtually ANY angle. Rubber-coated base protects vehicle paint.

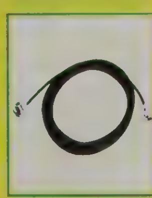


NEW!

RS-820
Heavy-Duty, Low Profile Trunk Lip or Hatch Back Mount. Rubber-coated base protects vehicle paint

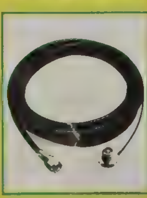
WS-1M
Multi-Adjustable Window Clip Mount.
11.5 feet of high quality coax.
Gold-plated UHF Conns. for Antennas up to 40" in height.

NEW!



3D4M Standard Cable Assembly
13.5 feet of low loss coax. Gold plated UHF (PL-259/SO-239) connectors.

3D5M Standard Cable Assembly
Same as 3D4M, but 17 feet of coax



CK-5M Deluxe Cable Assembly
13 feet double shielded very low loss coax + 12" RG-188 teflon coax. Gold plated UHF (PL-259/SO-239) connectors.

CK-5M5 Deluxe Cable Assembly
Same as CK-5M, but 17 feet of coax

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NEW!

MINI SPEAKER/MIC

HM-P2K/F
Mini spkr/mic featuring full TX/RX quality!
Light weight, extremely small: 1'x2" with collar pocket clip.
HM-P2K: Kenwood Version
HM-P2F: Icom/Yaesu Standard/Alinco/etc.

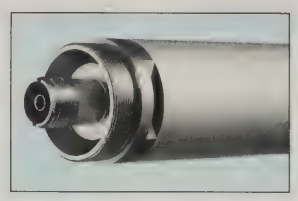
DIAMOND ANTENNAS –
THE STANDARD BY WHICH ALL OTHERS ARE JUDGED

ACCLAIMED AS THE TECHNOLOGICAL LEADER IN SINGLE & MULTIBAND ANTENNAS

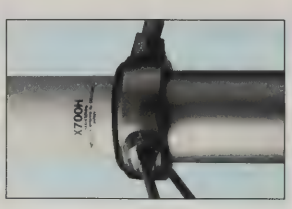
●WIDE-BAND PERFORMANCE ●FACTORY ADJUSTED/NO TUNING REQUIRED
●HIGHEST GAIN ●UPS SHIPPABLE ●HIGH WIND RATING ●FIBERGLASS RADOME
●DC GROUNDED ●STAINLESS HARDWARE

X-500HNA

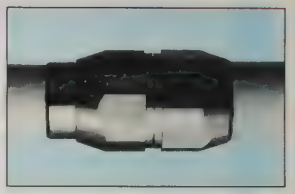
RUGGEDIZED BASE/ REPEATER ANTENNA



COAX CONNECTION AT BASE END



HEAVY DUTY BASE/ RADIAL ASSEMBLY



STRONG JOINT COUPLINGS

X series

MODEL	BAND(MHz)	GAIN(dBd.)	WATTS	CONN.	HT. Ft.	RATED WIND/ MPH
X-50A	144/440	4.5/7.2	200	UHF	5.6	135
X-200A	144/440	6.0/8.0	200	UHF	8.3	112
X-300A	144/440	6.5/9.0	200	UHF	10.2	112
X-510NA*	144/440	8.3/11.7	200	N	17.2	90
X-510MA	144/440	8.3/11.7	200	UHF	17.0	90
X-500HNA	144/440	8.3/11.7	200	N	17.8	90+
X-700HA	144/440	9.3/13.0	200	UHF	24.0	90
X-2200A	144/222	6.0/7.8	150	UHF	11.5	112
X-3200A	144/222/440	6.0/7.8/8:0	100/200	UHF	10.5	112
X-6000A	144/440/1240	6.5/9.0/10.0	100/100/60	N	10.5	112

BAND: 144=144 - 148MHz. 222=222 - 225MHz. 420=420 - 430MHz.
430=430 - 440MHz. 440=440 - 450MHz. 1240=1240 - 1300MHz.
* X510NJ :144 - 147 / 430 -440MHz

147MHz

445MHz

RADIATION PATTERNS FOR X-500HNA/X-510MA/X-510NA

X510

GH/F/U&V series

MODEL	BAND(MHz)	GAIN(dBd.)	WATTS	CON N.	HT. Ft.	RATED WIND/ MPH
DP-GH62	50	6.0	200	UHF	21.0	78
F-22A	144	6.7	200	UHF	10.5	112
F-23A	144	7.8	200	UHF	15.0	90
F-142A	222	5.5	200	UHF	6.0	110
F-718A*	440	11.5	250	N	15.0	110
F-1230A	1240	13.5	100	N	10.5	90
U-200A	440/1240	8.3/11.7	100	N	5.9	135
U-300A	440/1240	8.6/13.2	100	N	8.3	110
U-5000A	144/440/1240	4.5/8.3/11.7	100	N	5.9	135
V-2000A	50/144/440	2.1/6.2/8.4	150	UHF	8.3	110

*F-718A:440 - 450MHz, F-718J:430 - 440MHz, F-718L:420 - 430MHz

U-300A 440MHz

F-22

U-300A 1200MHz

F22 U5000 GH62

RF PARTS
SAN MARCOS,CALIF.
(619) 744-0900

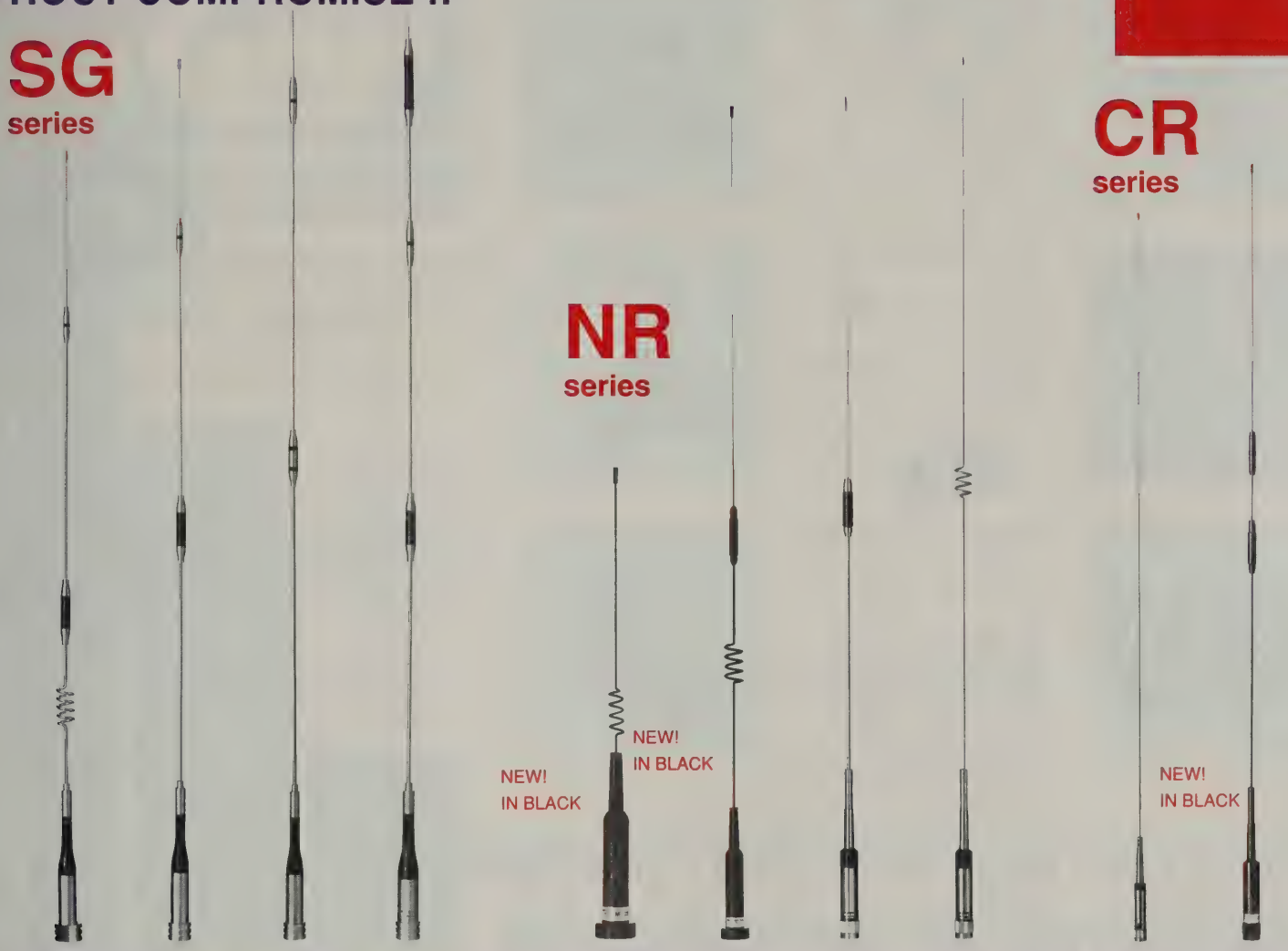
DIAMOND'S STATE OF THE ART VHF / UHF MOBILE ANTENNAS–MAXIMUM PERFORMANCE WITHOUT COMPROMISE !!

DIAMOND ANTENNA

SG series

NR series

CR series



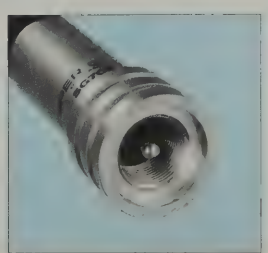
SG7200NMO SG7500 SG2000 SG7900 NR72BNMO NR73BNMO NR770R NR770H CR214S CR320A

MODEL	BAND	GAIN(dBd)	POWER (w)	MOUNT	HT (IN)	ELEMENT PHASING
NR-72BNMO	2m/70cm	2.15	100	NMO	13.8	1/4 λ ,1/2 λ
NR-73BNMO	2m/70cm	2.15/5.3	100	NMO	33.5	1/2 λ ,2-5/8 λ
NR-770SA	2m/70cm	2.15/2.15	100	UHF	16.9	1/4 λ ,1/2 λ
NR-770HA	2m/70cm	3.0/5.5	200	UHF	40.2	1/2 λ ,2-5/8 λ
NR-770HNMO	2m/70cm	3.0/5.5	200	NMO	38.2	1/2 λ ,2-5/8 λ
NR-770RA	2m/70cm	3.0/5.5	200	UHF	38.6	1/2 λ ,2-5/8 λ
NR-790A	2m/70cm	4.5/7.2	120	UHF	57.5	6/8 λ ,3-5/8 λ
SG-7000	2m/70cm	2.15/3.8	100	UHF	18.5	1/4 λ ,6/8 λ
SG-7200NMO	2m/70cm	3.2/5.7	150	NMO	36.6	1/2 λ ,2-5/8 λ
SG-7500A	2m/70cm	3.5/6.0	150	UHF	40.6	1/2 λ ,2-5/8 λ

MODEL	BAND	GAIN(dBd)	POWER (w)	MOUNT	HT (IN)	ELEMENT PHASING
SG-7900	2m/70cm	5.0/7.6	150	UHF	62.2	7/8 λ ,3-5/8 λ
SG-2000	2m	5.2	150	UHF	62.6	7/8 λ
NR-140A	1-1/4m	3.8	100	UHF	36.2	5/8 λ
NR-124	23cm	8.4	100	N	25	4-5/8 λ
CR-214S	2m/1-1/4m	2.15/3.4	120	UHF	37	1/2 λ ,5/8 λ
CR-224A	2m/1-1/4m	5.0/6.0	150	UHF	68.5	7/8 λ ,2-5/8 λ
CR-320A	2m/1-1/4m/ 70cm	2.15/3.8/5.5	200/ 200/100	UHF	37.4	1/4 λ ,1/2 λ , 2-5/8 λ
NR-2000NA	2m/70cm/ 23cm	3.15/6.3/9.7	100	N	39	1/2 λ ,2-5/8 λ , 5-5/8 λ

SPECIAL FEATURES

- Factory pre-tuned /no adjustment
- Highest Performance antennas
- SG&NR series do not need grounding
- NMO and UHF (PO) base styles
- New black color models available
- Fold-over feature on most models



FOLD-OVER

PATENTED ONE-TOUCH FOLD-OVER FEATURE

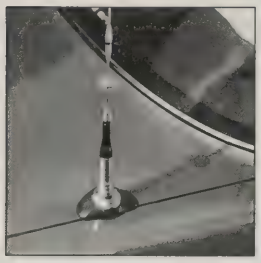
RF PARTS
SAN MARCOS,CALIF.
(619) 744-0900

PREMIUM GRADE ANTENNA MOUNTS BY DIAMOND

DESIGNED FOR TODAYS HIGH PERFORMANCE ANTENNAS

Super Gainer series folding type gutter mount
K300M(Coaxial cable : RG188A/U･5DSFA-3.5m) UHF jack - UHF plug
K300 Without cable assembly

Super Gainer series hatchback door/trunk lid mount
K400M(Coaxial cable:RG188A/U･5DSFA-5m) UHF jack - UHF plug
K400 Without cable assembly
K400K-3/8M 3/8×24Thd with cable



Variable angle trunk lid mount
(Coaxial cable:RG188A/U･5DFV-5m)
K600M UHF jack - UHF plug
K600N N jack - N plug
K600P UHF jack - N plug

NNR series hatchback door/ trunk lid mount
K200 Without cable assembly

Strong magnet antenna base
DP-SPM / 58U(Coaxial cable : RG58A/U-4m) UHF jack - UHF plug
DP-SPM / 5D(Coaxial cable : 5D2V-4m) UHF jack - UHF plug
DPK-5NM(Coaxial cable: 5D2V-4m) N jack - N plug
DPK-4NM-M(Coaxial cable: 3.5DQEFV-4m) UHF jack - N plug
Max.Ant.ht.48"

Super Gainer series folding type carrier/mirror mount
K540 Without cable assembly

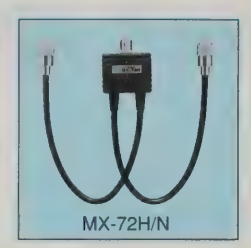
Teflon coaxial cable for mobile
FE5M(Coaxial cable:RG188A/U･5DFV-5m) UHF jack - UHF plug

DIAMOND ANTENNA BASES
GLP-5D UHF base connector 5D & 8X cable
GLP-58 UHF base for RG-58/U cable
GLP-5N N type base 5D & 8X

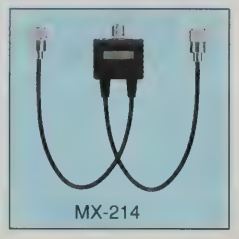
DUPLEXERS AND TRIPLEXERS FOR COMBINING AND SPLITTING VHF/ UHF FREQUENCIES

- Lowest loss
- Maximum Band Isolation
- Low VSWR

MX-72D/DN



MX-72H/N



MX-214

MX-324

MX-3000D/DN

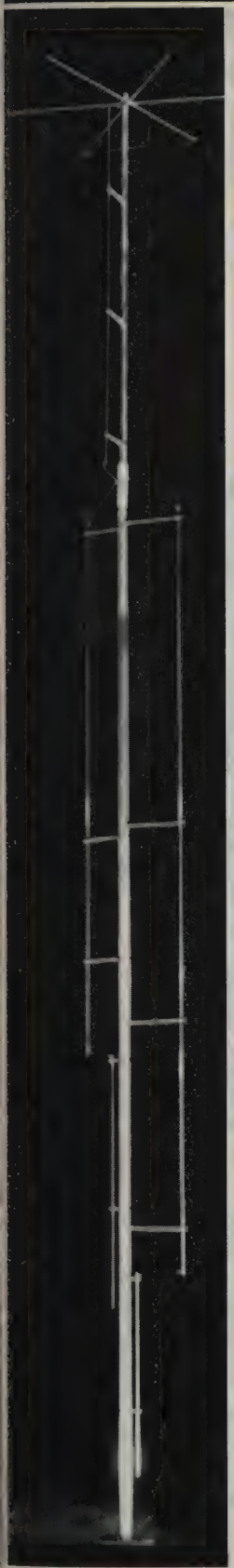
MX-3000N

MODEL	MX-37N	MX-72D	MX-72DN	MX-72H	MX-72N	MX-214	MX-324			MX-2000			MX-3000	MX-3000N	MX-3000D	MX-3000DN
FREQBAND MHz	1.6-470 900-1300	LPF 1.6-30		HPF 140-150	 400-460	140-150 220-225	LPF 1.5-150	BPF 220-225	HPF 400-550	LPF 1.6-60	BPF 110-170	HPF 300-950	LPF 1.6-160	BPF 350-500		HPF 850-1300
POWER CW WATTS P.E.P	100/50 200/100	400 1000		150 400	100 250	150/100 300/200	800	600	500	800	800	500	400 800	200 400		100 200
THRU LOSS/dB	0.25/0.45	0.15		0.15	0.25	0.3/0.4	0.3	0.4	0.4	0.15	0.2	0.25	0.2	0.3		0.4
ISOL	45dB	60dB				45dB	40-50dB			60dB			55dB			
VSWR	1.2 :1	1.2 :1				1.2:1	1.2:1			1.2 :1			1.2 :1			
CONNECTOR COMPLEMENT	N MIX 430 1200 N N	M MIX 144 430 M M	M MIX 144 430 M N	M MIX 144 430 M M	M MIX 144 430 M N	M MIX 144 220 M M	M MIX 144 220 430 M M M			M MIX 50 144 430 M M M			N MIX 144 430 1200 M M N	N MIX 144 430 1200 M N N	N MIX 144 430 1200 M M N	N MIX 144 430 1200 M N N
CONN	12"cabie w/ connectors	Direct		12"cabie w/connectors		12"cabie w/connectors							12"cabie w/ connectors		Direct connection	

Note: Connectors shown as "M" are low loss equivalent of SO-239 &PL-259. Connectors shown as "N" are standard Type-N.

GAP Antenna Products

Antennas for Limited Space • NO TRAPS • All out Efficiency & Performance • GAP gets it all



GAP ANTENNA PRODUCTS™

Featuring . . .

Center Launch Technology

NO Traps, Coils Transformers, Baluns, Resistors or Base Insulators

All Factory Pretuned!

For 50 years . . . the vertical has not changed–basically it's a vertical wire, fed at the base and surrounded by a number of ground radial wires. To operate multi-band, traps were placed at appropriate points to electrically shorten the antenna to a 1/4-wave on the various bands. The *big signals* on the band did not come from these verticals, and DX contacts, even with the vertical's well known low angle radiation, did not happen consistently. The vertical is used by those hams with minimal space, finances or with local restrictions. If a new amateur asked what to put up for an antenna, he was told, "put up a dipole". *Why?*–a conventional vertical, because of it's low radiation resistance and high earth losses (even with an extensive radial system), is the *most inefficient* antenna available for amateur use, and a trapped multi-band version is worse.

Did you know? . . . a 26 ft. vertical on 80 meters should be 66 ft. high! The *missing* 40 ft. is replaced by traps. This *short* antenna has a radiation resistance of only 4Ω–it's a virtual resistor, which when power is applied to it, radiates R.F. Unfortunately that isn't the only resistor in the antenna system, there are more! The most significant resistor is called *earth loss,* which results from radials and the ground itself. If three radials are used, the earth loss created is more than 30Ω. We now have a antenna with 4Ω that radiates and 30Ω that warms the ground– a total of 34Ω. If only 4Ω radiates, this means that if 100 watts are fed to this antenna, *only 12 watts* actually radiates. Inserting lossy traps adds 2Ω, and the power drops from 12 watts to 11 watts radiated. Traps don't matter much–it's the huge earth loss matters.

Put out a lot of radials? . . . If you were lucky and found 4000 ft. of wire (for 60 radials), and the room to bury them, the earth loss would drop from 30 to 4Ω. All that effort, and the radiated power for 100 watts fed, is still only 50 watts–*half is still warming the ground!* Worse than that, you now destroy the multi-band operation because a multi-band vertical must have earth loss to work! That's why a roof-mounted multi-band vertical won't perform well on all bands. It was obvious that a new vertical design was needed with the primary objective to increase the radiation resistance and decrease or eliminate earth losses.

Enter the GAP antenna, a radically different vertical! . . . Technically, earth loss results from the capacitance of the antenna to ground from above the feed point. This is why you won't find much earth loss with dipoles–because they are elevated. The GAP design *elevates* the feed point to increase the radiation resistance closer to 50Ω, resulting in a better match to the feedline, and virtually eliminating earth losses. Comparing a conventional vertical's feed point at ground level *vs* the GAP feed at 16 ft. (Challenger) shows a reduction in loss from over 30Ω to 5Ω. So, the GAP design, with an antenna resistance of 50Ω and an earth loss of 5Ω, is not a very lossy antenna–it's efficiency is approximately **90%**. When compared to the low 12% efficiency of a conventional vertical, the improvement is a dramatic **600%**

NO TRAPS in the GAP! . . . Operating as a vertical dipole with no traps, an elevated feedpoint and unique tuner rods enables the GAP to be more reliable. It has with wider bandwidth and better frequency stability which results in in less tuning and retuning.

Voyager DX-IV

• **Bands:** 160, 80, 40 and 20 meters • **Bandwidth:** Entire band on 80, 40 & 20 meters, 90 kHz on 160 meters • **Power Rating:** Legal limit • **Feedline:** 50Ω (coax) • **Height:** 45 ft. **Construction:** 2" diameter 6063-T832 aluminum, and all stainless hardware • **Mounting:** Aluminum pivot and guy brackets supplied • **Wind Area:** 7 sq. ft., requires 2 sets of guy ropes total 350 ft. • **Radials:** 3, each 57 ft. long • **Area Required:** 25 ft. x 25 ft. for guys and radials.

Challenger DX-VIII

• **Bands:** 80, 40, 20, 15, 12, 10, 6 and 2 meters • **Bandwidth:** Entire band on 40, 20, 15 and 12 meters, 130 kHz on 80 meters and 1 MHz on 10 meters (No Traps) • **Power Rating:** Legal Limit • **Feedline:** 50Ω (coax) • **Height:** 31.5 ft. • **Weight:** 18 lbs • **Construction:** Aluminum tubing 6063-T832, and high temperature coaxial cable, stainless steel hardware. **Mounting:** Self-standing ground mount • **Radials:** 3, each 25 ft. long • **Area Required:** 10 ft. x 12 ft.

Eagle DX-VI

• **Bands:** 40, 20, 17, 15, 12, 10 meters • All out efficiency–all out performance! No coils, resistors, ground plane or earth loss. **Bandwidth:** VSWR under 2:1 on all bands with full bandwidth on 40 and 10 meters; can be custom tuned for your favorite part of the band. • **Height**: 21.5 ft. • **Weight:** 11 lbs • **Mounting:** Supplied with mount for pole, mast, tower, or ground mount, **Radials:** 3 rigid counterpoises, each only 8 ft. long. (***GAP not available at AES® Wickliffe)***

Voyager DX-IV	Challenger DX-VIII	Eagle DX-VI
4 Bands	8 Bands	6 Bands
$399.00	$259.00	$269.00

For Antenna Performance • The Answer is GAP Technology!

VHF and UHF Fixed Station Vertical Antenna

G6-270R

Dual-band Base Antenna for 2 Meter and 440 MHz.

Created from the same design as the G7 and G6 series. Rugged, Solid Gain and Wide Bandwidth. Consists of 5/8λ over 5/8λ on 2 m and 4 x 5/8λ on 440 Mhz.

MECHANICAL

- Length: 7 ft. 6 in.
- Weight: 5.3 lbs.
- Wind Survival: 100 mph.
- Max Power: 100 watts
- Gain: 6 dBd VHF & UHF
- Bandwidth: 2MHz* (2m)
  10 Mhz.* (440)
- Feed: Shunt, DC ground
- Connector: N female
- Bandwidth under 1.5:1 VSWR

G6-440

Omnidirectional Fixed Station

Each is pre-tuned at the factory for easy installation. Enclosed in a lightweight tapered fiberglass radome for low wind resistance. Compact size allows shipment via U.P.S. or Parcel Post.

ELECTRICAL

- Maximum power in put: 250 watts
- Gain: 6db
- VSWR 8 MHz. under 1.5:1
- Impedance: 50 Ω nominal
- Lightning protection: direct ground
- Termination: Type N female

MECHANICAL

- Length: 87"
- Weight: 16 lbs.
- Wind Survival: 125 mph.
- Max Power: 100 watts

G6-144B

Two Meter Antenna Omnidirectional Fixed Station

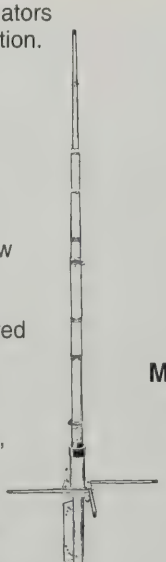
6 dB GAIN – Compared to 1/2 Wave Dipole Get the tremendous advantage of 6 dB gain transmitting, 6 dB gain receiving. Whether your application is for individual fixed station or repeater operation the Hustler G6-144B has superior mechanical and electrical design. Optimum gain is achieved with two 5/8 wavelength radiators correctly phased in collinear configuration. Stated gain figure is conservative and maximum signal radiation is at an extremely low angle

ELECTRICAL

- 6 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Maximum radiation – extremely low angle 50 Ω feed impedance
- Field adjustable -140–150 MHz.
- SWR at resonance - 1.2:1 measured at antenna
- Bandwidth - 4Mhz @ 1.5 VSWR
- Feed-shunt with D.C. grounding
- Radiator - 5/8 wave, lower section, 1/4 wave

MECHANICAL

Vertical element – 117" long, 1-1/8" telescopic to 3/8" OD high strength aluminum • Connector – SO-239 • Wind load - 26 lbs at 100mph • Completely self supporting • Mounting - vertical support up to 1-3/4" OD • Shipping wt: 6.8 lbs.



G7-144

Two Meter Antenna Omnidirectional Fixed Station

7 dB GAIN – Compared to 1/2 Wave Dipole

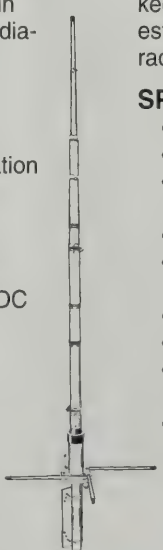
ELECTRICAL

Radiator: Collinear shunt fed. Triple 5/8 wave elements in series, separated by 2 phasing coils to produce maximum gain and extremely low angle of radiation. 7 dB gain over 1/2 wave dipole

- Omnidirectional radiation pattern
- Extremely low angle of radiation
- Tuning range: 144-148 MHz
- Bandwidth for 2:1 or better VSWR 6MHz.
- Power: 60 watts - 50 Ω feed impedance - shunt fed with DC grounding

MECHANICAL

- High strength fiberglass and aluminum
- Completely self-supporting
- Length 184"
- Radials: (4) 1/4 wave x 3/8" O.D. rod
- Connector: N-type
- Wind load: 26lbs. @ 100 mph
- Mounting: Vertical support up to 1-3/4" O.D.
- Weight: 10 lbs.



G7-220

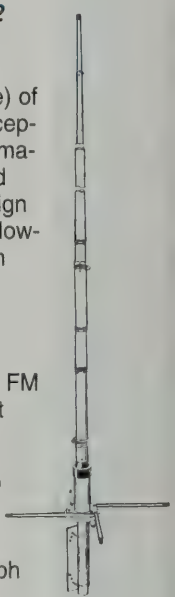
Omnidirectional Fixed Station

7 dB GAIN – Compared to 1/2 Wave Dipole

The 7 dB omnidirectional gain (compared to a 1/2 wave dipole) of this rugged antenna means exceptional 220 MHz. (1-1/4 meter) amateur performance, receiving and transmitting. A unique new design keeps the signal pattern at the lowest possible angle for maximum radiation efficiency.

SPECIFICATIONS

- Length: 122" long
- Power capability: 600 watts FM
- SWR at resonance: 1.2:1 at antenna 1.5:1
- SWR - Impedance: 50 Ωs
- Radials: (4), 14-3/4" x 3/16" O.D.
- Conncetor: Type N
- Wind load 26 lbs. at 100 mph
- Mounting vertical support up to 1-3/4" O.D.
- Shipping weight: 7 lbs.



HUSTLER®

RELIABILITY & PERFORMANCE... BEYOND YOUR EXPECTATIONS!

FX Series

3/4 dB gain; 5/8-wave , 200 watt rating
15 foot coax PL-259 connector installed
Magnetic mount holds to 100 mph

Model FX-2-
-meter, black and chrome
Model FX220-
20 MHz, black and chrome

lso available in black
Model FX-220B, 220 MHz

RX Series

- 3.4 dB Gain; 5/8-wave • 100 watt rating
- 15 foot coax PL-259 connector installed
- Magnetic mount holds to 75 mph

Model RX-2-
2 meter black and chrome
Model RX-220-
220 MHz, black and chrome

Model BBLT-144A

3.4 dB Gain Trunk-Lip Mount Antenna
Adjustable 143-149 MHz 3.4 dB gain • SWR: 1.1:1 at resonance • Power rating: 200 watts FM • Shunt-fed - - reduced static • Length: 4'4" inc. mt.• Spring and 180 • swivel ball for vertical positioning • 17' coax and connector • No drilling required • Weight: 2.76 lbs.

Model RX-440

UHF Magnetic Mount
- 5/8 over 1/4 wave design
- 5 dB gain
- Speed rated to 75 mph
- Includes 12' coax

Model SF-220

Low Cost 3.4 dB Gain 220 MHz 5/8-wave for 3/8" x 24 thread mounts
• 1.2:1 SWR at resonance • Power rating: 100 watts FM • Tapered stainless steel • 3/8" x 24 thread mount • Length: 2'7" • Wt.: 0.87 lbs.

Model SF-2

Low Cost 3.4 dB Gain 2 meter 5/8-wave for 3/8" x 24 thread mt.
• 3.4 dB gain • 1.2:1 SWR at resonance • Power rating: 100 watts FM
- Tapered stainless radiator
- 3/8" x 24 thread mount
- Length: 4' Wt..: 0.5 lbs.

Model BBL-144A

3.4 dB Gain Roof Mount Antenna
Same as **BBLT-144A** but mounts in 3/4" hole on a flat surface. 17' coax with connectors.

Collinear

Unity Gain

Model CGT-220

5.2 dB Gain 5/8 Over 1/4-Wave Collinear Trunk-Lip Mount Antenna
• Super gain: 5.2 dB • 1.1:1 SWR (typical) at esonance • 4 MHz band width, 1.5:1 or better SWR • Power rating: 200 watts FM • Heigth: 4' 9" ncluding mount • Spin knob to remove antenna • Furnished with 17' of low loss coax and onnector

Model CG-220

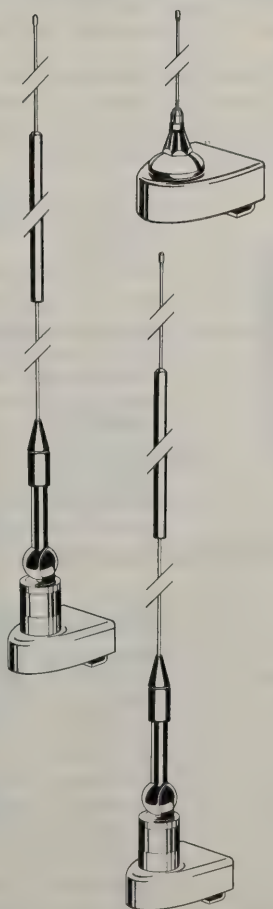
las identical electrical characteristics as **GT-220** but with 3/8 x 24 threaded base r use with standard ball mounts or other /8" x 24 Hustler mounts.

Model CGT-144

.2 dB Gain Over 1/4-Wave Collinear runk-Lip Mount Antenna
Super gain 5.2 dB • 6 MHz band-width, .15:1 SWR • Power rating: 200 watts FM • Length: 7' 1" including mount • Spring and 30 • swivel ball for vertical positioning • 17' oax and connector • No drilling required Wt.: 3.34 lbs.

Model CG-144

ame as CGT-144 but has 3/8"x24 readed base for use with standard ll mounts or other 3/8"x24 Hustler ounts.



Model THF

VHF/UHF Trunk-Lip Mount Antenna
Trimmable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Easy to install trunk-lip mount attaches to rear or side of trunk lid without drilling. Supplied ready for operation with 17' of coax with connectors installed. 1.5 lbs.

Model UHT-1

VHF/UHF Roof/Deck Mount Antenna
Low profile mount designed for easy installation in a 3/4" hole on any flat surface or on roof without pulling headliner. Unity gain, 1/4-wave performance. Trimmable 17-7 PH stainless steel radiator permits operation on any frequency from 140 to 500 MHz. Trim chart, 15' of coax and connector included, 1.2 lbs.

Model UGM

VHF/UHF Magnetic Mount Antenna
Extend range of handheld or portable radios. Trimmable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500MHz. Trim chart included. Highly efficient mylar-protected magnetic mount attaches conveniently to magnetic compatible surfaces. No drilling! Supplied ready for operation with 7' of mini-coax with BNC connector and trim chart. 1 lb.

Model MKR-2 Radial Kit

Contains three decoupling radials and mount to convert series-fed mobile VHF antennas to fixed operation. Performance is comparable to many regular base antennas. Suitable for permanent installations or portable use. Heavy-duty zinc plated mast bracket and hardware. Accepts antennas with standard 3/8 x 24 threaded base. 2 lbs.

Deluxe Mobile Mounts

For antennas up to 60" in length with 3/8" x 24 threads

Model FXM Heavy Duty Magnetic Mount
- Accepts 3/8" x 24 thread antennas
- Speed rated to 100 mph
- For use with antennas up to 55" long

Model HOT "HUSTLOFF" Trunk-Lip
Mounts without holes or drilling. For security just turn knob to remove antenna and mount from trunk-lid. Not removable when trunk closed. 180 • swivel mount with 3/8" x 24 threads, 17' coax with connectors attached. 1.9 lbs.

Model HLM Deluxe Trunk-Lip Mount
Designed specifically for hatch and slanted-back vehicles. No holes or drilling. 180 • adjustable swivel with 3/8" x 245 threads. 17' coax with connectors attached. 1.7lbs.

Model TLM Trunk-Lip Mount
Installs on side of edge or trunk-lid without holes or drilling. Vertical mount with 3/8" x 24 threads. 17' coax with connectors attached. 1.86 lbs.

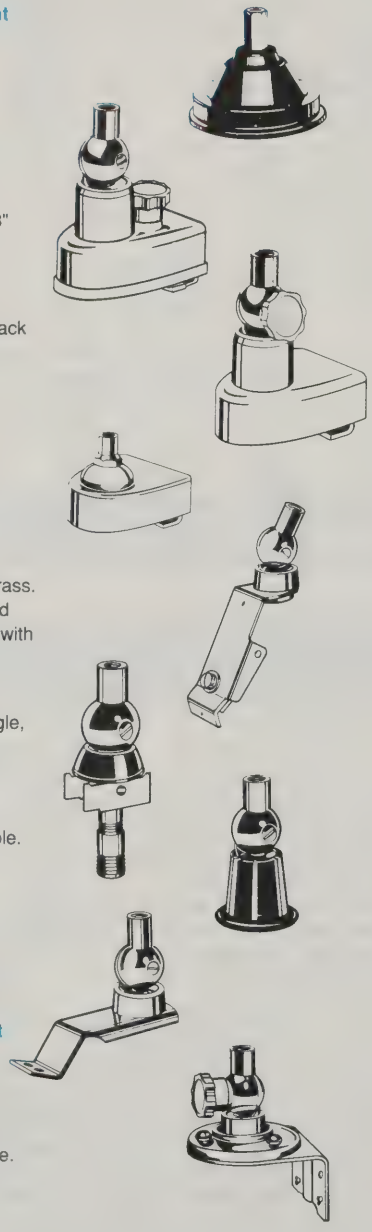
Model GCM-1 Rain Gutter Mount
Deluxe heavy - guage triple chrome plated brass. installs without holes or drilling on all sizes and any angle rain gutter. 180 • adjustable swivel with 3/8 x 24 threads. 0.8 lbs.

Model MM-1 Cowl Mount
Low profile, installs on any flat surface, or angle, in a 1" hole. 180• split-ball swivel for optimum vertical positioning, 3/8" x 24 threads. 1.9 lbs.

Model MM-3 Cowl Mount
Installs on any flat surface, or angle, in a 1" hole. 180 • swivel for optimum vertical position. 3/8" x 24 threads, 5' coax with connectors attached. 1.3 lbs.

Model TGM-1 Trunk Groove Mount
Installs in a hidden area of trunk groove 180 • adjustable swivel, 3/8 x 24 threads. 0.74lbs.

Model RVM Recreational Vehicle Mount
Heavy duty design for veritcal side panel or roof mounting. Knob for rapid removal or lay-down. Optimum vertical positioning with 180 • swivel, 3/8" x 24 threads, 17' coax, including connectors, grommet, and hardware. 1.9lbs.



Coax Leads

LU-216
216" top-quality RG-58 coaxial cable with PL-259 connectors on both ends. Shipping weight 0.76 lbs.

L-14-144
144" top-quality RG-58 coaxial cable with PL-259 connector on one end and split end with lugs on the other. Shipping weight 0.51 lbs.

L-14-240
Same as L-14-144 except 240" coaxial cable.Shipping weight 0.71 lbs.

Standard Commercial Stainless Steel

Model SSM-1
Standard commercial ball mount and stainless steel spring. Shipping weight: 2.53 lbs.

Model SSM-2
Ball mount only.
Shipping weight: 1.3 lbs.

Model SSM-3
Stainless steel spring including 3/8"- 24 coupling stud.
Shipping weight 1.21 lbs.

Professional Series - Heavy Chrome

Model C-32
Hustler professional ball mount. Furnished complete with rubber pad, steel backup plate, all mounting hardware, and hex wrenc
Shipping weight: .48 lbs.

Model C-29
Stainless steel, corrosion resistant and electropolished spring comple with 3/8"-24 coupling stud. Shipping weight 2.70 lbs.

Model C-30
Chrome-plated steel spring comple with 3/8"-24 coupling stud. Shipping weight: 1.2 lbs.

Bumper Mount

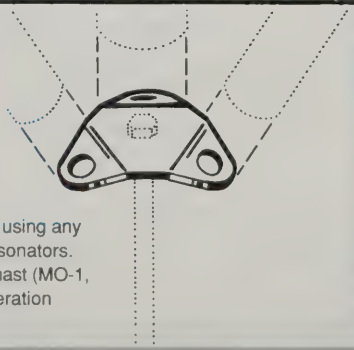
BM-1
Design is rugged for supporting Hustler antenna with standard or super resonators. Heavy stainless steel strap, stronger than chain, fits most bumpers inconspicuously. Assembly is easily installed and held rigid by "J" bolts at the top and bumper strap clamp at bottom.
Mount includes 180 • adjustable swivel ball for vertical positioning of antenna. Hardware is zinc plated for superior resistance against corrosion. Shipping weight 2.70 lbs.

Quick Disconnect

QD-2 100% Stainless Steel
Remove antenna from mount in seconds with push and twist release. Every part including the compression spring is manufactured from the best available 100% stainless steel. Special design of enclosed compression and lock assembly asssures freedom against ice and dirt jam up. Accommodates small, medium and largest size mobile antennas. Equipped with 3/8"-24 threads, female one end and male on the other. Shipping weight .40 lbs.

Multi-band Adapter

Model VP-1



- Automatic bandswitching using any three Hustler H.F. mobile resonators.
- Adapts any Hustler H.F. mast (MO-1, MO-2, MO-3) to tri-band operation easily and quickly.

Resonator Spring RSS-2

Finest quality stainless steel spring for use between resonator and Hustler antenna mast. This 3/4" x 3-1/2" spring absorbs shock when antenna strikes overhanging obstructions. Supplied ready for easy install-ation with 3/8"-24 threads, female on one end, male on the other.
Shipping weight .36 lbs.

Fixed Station Multi-Band HF Vertical Antennas

- Broadbanded - low VSWR at band edges
- Power capability - full legal limit on SSB or CW
- Solid one-inch fiberglass trap forms for optimum electrical and mechanical stability
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss,high strength insulators
- Stainless steel clamps and hardware
- Easy assembly and tuning
- Single line feed with any length of 50 ohm coax
- Use as ground mount with or without radials, or elevated mount with radials

Model 6-BTV

Bands	10-15-20-30-40 & 75 or 80 meters
Length/weight	24'/16.5 lbs.
Mounting	vertical support up to 1-3/4" O.D.
Wind load	29 Lbs. @ 70 mph
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 2:1 or better at band edges on 10-40 meters (100 KHz on 75/80 meters)

Model 5-BTV

Bands	10-15-20-40 & 75 or 80 meters
Length/weight	25.1/17lbs.
Mounting	vertical support up to 1-3/4 O.D.
Wind load	29 lbs. @ 70 mph
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 2:1 or better at band edges on 10-40 meters (100 KHz on 75/80 Meters)

Model 4-BTV

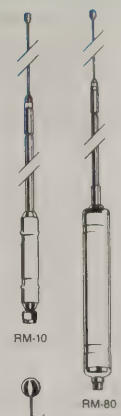
Bands	10-15-20-40 meters
Length/weight	21'5" / 15lbs.
Mounting	vertical support up to 1-3/4" O.D.
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 1.6:1 at band edges

Hustler Resonators

Standard Resonators

Power rating 400 watts SSB

Part	Description	Weight	Approx. Bandwidth 2:1 SWR or Better
RM-10	10 METER	.41 lbs.	150-250 kHz
RM-11	11 METER	.41 lbs.	150-250 kHz
RM-12	12 METER	.42 lbs	90-120 kHz
RM-15	15 METER	.42 lbs.	100-150 kHz
RM-17	17 METER	.46 lbs.	150 kHz
RM-20	20 METER	.46 lbs.	80-100 kHz
RM-30	30 METER	.84 lbs.	50-60 kHz
RM-40	40 METER	.84 lbs.	40-50 kHz
RM-75	75 METER	1.05 lbs.	25-30 kHz
RM-80	80 METER	1.05 lbs	25-30 kHz



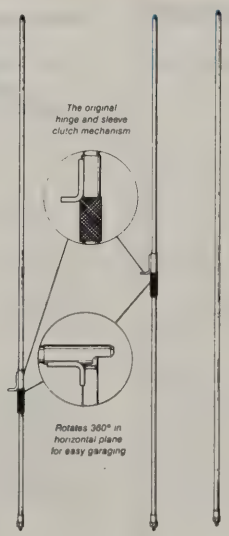
Super Resonators

Power rating full legal limit. Super Resonators also offer wider bandwidth, espically on 40, 75 and 80 meters.

Part	Description	Weight	Approx. Bandwidth 2:1 SWR or Better
RM-10-S	10 METER	1.0 lbs.	250-400 kHz
RM-11-S	11 METER	1.0 lbs.	250-400 kHz
RM-15-S	15 METER	1.2 lbs	150-200 kHz
RM-20-S	20 METER	1.2 lbs.	100-150 kHz
RM-40-S	40 METER	1.82 lbs.	50-80 kHz
RM-75-S	75 METER	2.11 lbs.	50-60 kHz
RM-80-S	80 METER	2.11 lbs	50-60 kHz

Mobile HF Antennas

Hustler Masts



MO-1 Mobile mast. 54" high for deck or fender mounting- folds over 15" above base

MO-2 Mobile mast. 54" high, for bumper mounting - folds over 27" above base.

MO-3 Mobile mast. 54" high, Great for marine use!

MO-4 HF Mobile Mast.
- For use with Hustler HF resonators
- Only 22" long
- Suitable for trunk or deck mounting
- Includes 3 new tip rods

30 Meter Add-on Kit for 4-BTV and 5-BTV

- **Model 30-MTK**
- Full 30 meter Band coverage
- Will not affect normal operation
- Easy installation
- All hardware included
- Weight: 5 lbs.

RMX 10 Meter Mobile

- VSWR - 250-400 kHz under 2:1
- 1000 watt capacity
- Only 46 inches tall
- Can be trunk lip mounted using model HLM or TLM
- Stainless steel impact spring built into top of coil

Available in Black or white

Reliability & Performance... Beyond Your Expectations!

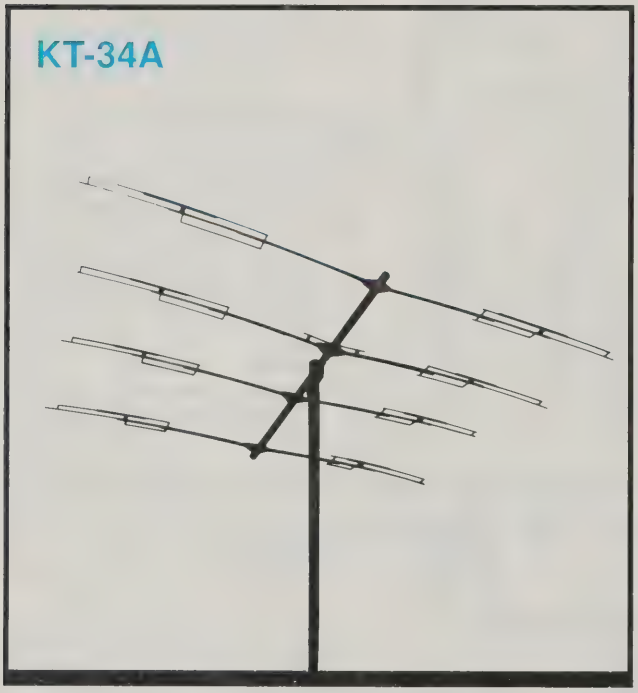
KLM TRIBANDERS

The KT-34A and KT-34XA have become pace-setters for tribander performance. The four element KT-34A offers an unusually compact solution for a three-band high performance installation. The six element KT-34XA has been designed to outperform all commercially available tribanders and many monobanders as well. The high performance of these tribanders results from their innovative construction. Traps, coils, and capacitors found on conventional tribanders are replaced by lossless linear loading and high-Q air capacitors constructed of aluminum tubing. These techniques coupled with *KLM's* unique dual-driven element system allow broadband performance with high gain and low VSWR remaining nearly constant across the three bands. The KT-34A can be upgraded to the KT-34XA at any time.

The boom length of the KT-34XA is doubled, when one tri-resonant and one full size 10 meter element is added. These changes increase the gain to 11-11.3 dBd on 10M, 9-9.5 dBd on 15M, and 8.5-9 dBd on 20M.

Structurally, the KT-34A is built tough. All the aluminum, including the boom, is strong weather resistant 6063-T832 alloy. All the hardware is stainless steel except for the mounting U-bolts. Virtually indestructible Lexan insulators support the elements and insulate them from the boom. Rotation is possible by most any ham rotor. Wind balance and wind survival are excellent.

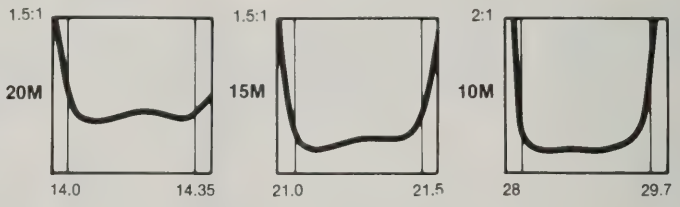
KT-34A



SPECIFICATIONS

ELECTRICAL		MECHANICAL	
BANDWIDTH	14.0-14.350 MHz	ELEMENT LENGTH	24 ft.
	21.0-21.450 MHz	BOOM LENGTH	16 ft.
	28-29.7 MHz	TURN RADIUS	16 ft.
GAIN	7 dBd ± 0.3 dB	WINDLOAD	6 sq. ft.
VSWR	1.5:1	WEIGHT	45 lbs.
F/B-F/S	20 dB/30 dB	MAST	2 in. O.D.
FEED IMP	50 Ohms w/Balun		
BALUN	4:1, 5 kW PEP		

KT34A vs. SWR

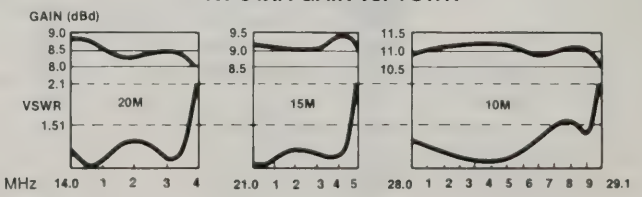


KT-34XA

SPECIFICATIONS

ELECTRICAL		MECHANICAL	
BANDWIDTH	14.0-14.350 MHz	ELEMENT LENGTH	24 ft.
	21.0-21.450 MHz	BOOM LENGTH	32 ft.
	28-29.1 MHz	TURN RADIUS	21.5 ft.
GAIN	8.5-9 dB	WINDLOAD	9 sq. ft.
	9-9.5 dB	WEIGHT	68 lbs.
	11-11.3 dB	MAST	2 in. O.D.
VSWR	1.5:1		
F/B-F/S	20 dB/40 dB		
FEED IMP	50 Ohms w/Balun		
BALUN	4:1, 5 kW PEP		

KT-34XA GAIN vs. VSWR



KLM VHF-UHF ANTENNAS

2 METER YAGIS

2M-16LBX 2M-13LBA 2M-11X 2M-8 2M-4X

2 METERS

	2M-20 LBX	2M-16 LBXM	2M-13 LBA	2M-11 X	2M-8	2M-4 X
ELECTRICAL:						
BANDWIDTH	SPEC. 144-146 USABLE 143-148	144-148 MHz	144-148 MHz	SPEC. 144-146 USABLE 143-148	144-148 MHz	144-148 MHz
GAIN	145-15.5 dBd 146-15.4 dBd 147-15.3 dBd 148-13.7 dBd	144-15.5 dBd 145-14.5 dBd 146-14.4 dBd 147-14.3 dBd 148-13.2 dBd	144-14.5 dBd 13.3 dBd	12.5 dBd	10.3 dBd	8.5 dBd
VSWR.....Less than	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/B.....Greater than	30 dB	20 dB	20 dB	20 dB	30 dB	20 dB
BEAMWIDTH	E=26°, H=28°	E=26°, H=29°	E=28°, H=33°	E=30°, H=34°	50°	62°
FEED IMP	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	1:1 Sleeve, 2 kW	4:1, 2 kW Coax
MECHANICAL:						
ELEMENT LENGTH	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.
BOOM LENGTH	38.5 ft.	28 ft.	21.5 ft.	15 ft., 4 in.	7.25 ft.	4.2 ft.
TURN RADIUS	21 ft. 10 in.	15 ft. 5 in.	13 ft.	9 ft.	4 ft.	4 ft.
WINDLOAD	2.19 sq. ft.	1.75 sq. ft.	1.6 sq. ft.	1.38 sq. ft.	.65 sq. ft.	.25 sq. ft.
WEIGHT	17 lbs.	10 lbs.	9 lbs.	5.5 lbs.	4 lbs.	2 lbs.
MAST	2 in.	2 1/8 in. max.	2 in.	2 1/8 in. max.	1 1/2 in. max.	1 1/2 in. max.

440-16X 440-10X 440-6X 1.2-15LBX 1.2-24LBX

440 MHz — 432 MHz — 1296 MHz

	440-16X	440-10X	440-6X	432-30 LBX	432-20 LBX	1.2-44 LBX	1.2-24 LBX	1.2-15 LBX
ELECTRICAL:								
BANDWIDTH	420-450 MHz	420-470 MHz	420-470 MHz	430-440 MHz	425-440 MHz	1260-1300 MHz	1260-1300 MHz	1260-1300 MHz
GAIN	14.0 dBd	11.5 dBd	8.9 dBd	17.3 dBd	15.3 dBd	18.2 dBd	16.2 dBd	13.6 dBd
VSWR.....Less than	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/B.....Greater than	20 dB	20 dB	20 dB	20 dB	20 dB	39 dB	39 dB	39 dB
FEED IMPEDANCE	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	Coax "N" 4:1, 2 kW	Coax "N" 4:1, 2 kW	Coax "N" 4:1 2 kW	1:1 Sleeve, 2 kW	1:1 Sleeve, 2 kW	4:1 Rigid Coax	4:1 Rigid Coax	4:1 Rigid Coax
BEAMWIDTH	E=28°, H=32°	48°	60°			E=16°, H=18°	E=22°, H=24°	E=28°, H=30°
MECHANICAL:								
ELEMENT LENGTH	14 in. max.	14 in. max.	14 in. max.	14 in. max.	14 in. max.	4.5 in.	4.5 in.	4.5 in.
BOOM LENGTH	10 ft. 3 in.	4.75 ft.	28 in.	21 ft. 11 in. (9.6 wavelength)	12 ft. 4 in. (5.42 wavelength)	12 ft. 4 in.	75 3/4 in.	42 in.
TURN RADIUS	6 ft.	4.90 ft.	2 ft. 5 in.	12 ft. 4 in.	7 ft.	84 in.	38 in.	43 in.
WINDLOAD	0.74 sq. ft.	0.53 sq. ft.	0.2 sq. ft.	1.72 sq. ft.	0.9 sq. ft.	1 sq. ft.	1/2 sq. ft.	1/4 sq. ft.
WEIGHT	7.5 lbs.	4 lbs.	1.2 lbs.	9 lbs.	5 lbs.	10 lbs.	7 lbs.	4 lbs.
MAST	1 1/2 in.	1 1/2 in.	1/12 in.	2 1/8 in. max.	1 1/2 in.	2 in. O.D.	up to 2 in. O.D.	up to 2 in O.D.
MOUNT	Center	Rear	Rear	Center	Center	Center	Center	Rear

KLM SATELLITE CIRCULARS - VHF/UHF

ELECTRICAL:

	2M-14C	2M-22C	435-18C	435-40CX
BANDWIDTH	144-150 MHz	144-150 MHz	420-450 MHz	420-450 MHz
GAIN	11 dBc	13 dBc	12 dBc	15.2 dBc
VSWR.....Less than	1.5:1	1.5:1	1.5:1	1.5:1
F/B .....Greater than	20 dB	20 dB	20 dB	20 dB
FEED IMP	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BEAMWIDTH	38°	34°	34°	25°
ELLIPTICITY	3 dB max	3 dB max	3 dB max	3 dB max
BALUN	(2) 4:1 coax, 2 kW*	(2) 4:1 Coax, 2 kW*	(2) 4:1 Coax, 2 kW*	(2) 4:1 Coax, 2 kW*

MECHANICAL:

ELEMENT LENGTH	40.625 in. max	40.625 in. max	13.25 in. max	13.625 in. max
BOOM LENGTH	12 ft. 9 in.	19 ft. 1 in.	7 ft. 4 in.	14 ft. 7 in.
TURN RADIUS	7 ft.	11 ft.	7 ft.	8 ft., 9 in.
WINDLOAD	1.25 sq. ft.	1.85 sq. ft.	0.5 sq. ft.	1.16 sq. ft.
WEIGHT	7.5 lbs.	11 lbs.	4.5 lbs.	10 lbs.
MAST	2 in.	2 in.	1.5 in.	1.5 in.
MOUNT	Center	Center	Rear	Center
POLARITY	Circular R.H. and L.H. switchable using CS-3	Circular R.H. and L.H. switchable using CS-2		

*Derate to 250W when using Switchers (supplied)

2M-22C

435-40CX

HF LOG PERIODICS

KLM's Log Periodic Antennas offer extended coverage of the amateur bands and intermediate frequencies. The **10-30-7LPA** for example, covers 20, 15, and 10 Meters plus the WARC bands and many MARS frequencies. The addition of the **40M-1** dipole module provides 40 Meter operation as well. This can easily be accomplished using the **SK-8** Conversion Kit. This system is also available complete as the **7.2/10-30-LPA.** All HF Log Periodic Antennas are available with a Heavy Duty Boom at additional cost. Also, 10kW Baluns are available for a nominal charge.

ELECTRICAL:

	10-30-7LPA	7.2/10-30LPA	6-30-15LPA
BANDWIDTH	10-30 MHz	7.2/10-30 MHz	6-30 MHz
GAIN	7 dBd typ	3/7 dBd typ	5.5 to 8 dBd
VSWR	1.5:1 typ	1.5:1 typ	2:1 and less, typ
F/B	15 dB	10/15 dB	15 dB typ
FEED IMP	50 Ohms, unbal.	50 Ohms, unbal.	50 Ohms, unbal.
BALUN(S)	4:1, 5 kW	4:1, 5 kW	(3) 4:1, 4 kW PEP

MECHANICAL:

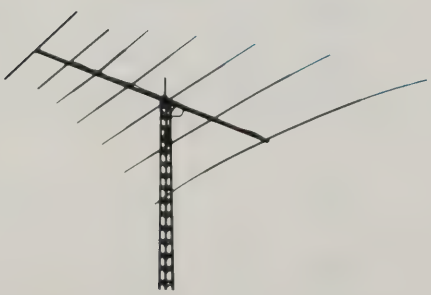
ELEMENTS	7	8	1.5
ELEMENT LENGTH	43 ft.	46 ft.	48 ft.
BOOM LENGTH	30 ft.	42 ft.	46 ft. (6-12-8)
TURN RADIUS	26 ft.	32 ft.	30 ft. (10-30-7)
WINDLOAD	8.25 sq. ft.	12 sq. ft.	24 sq. ft.
WEIGHT	70 lbs.	100 lbs.	150 lbs. (6-12-80) / 70 lbs. (10-30-7)
MAST	2 in.	2 in.	2 in./3 in.

SK-8 Conversion Kit

This kit enables you to add 40 Meters to your *KLM* 10-30-7LPA antenna. The SK8 kit includes a boom extension, a beta match for the dipole and all the necessary hardware including a full set of instructions. Purchase a *KLM* 40M Dipole to finish the upgrade.

By upgrading your present 10-30-7LPA to include 40M you will enjoy increased Front-to-Back on 20M and will see Front-to-Back gain on 40M similar to a 2 element beam. You will also enjoy forward gain on 40 Meters through the interaction of the full log array. It's an easy way to upgrade your log.

10-30-7LPA



7.2/10-30LPA

6-30-15LPA

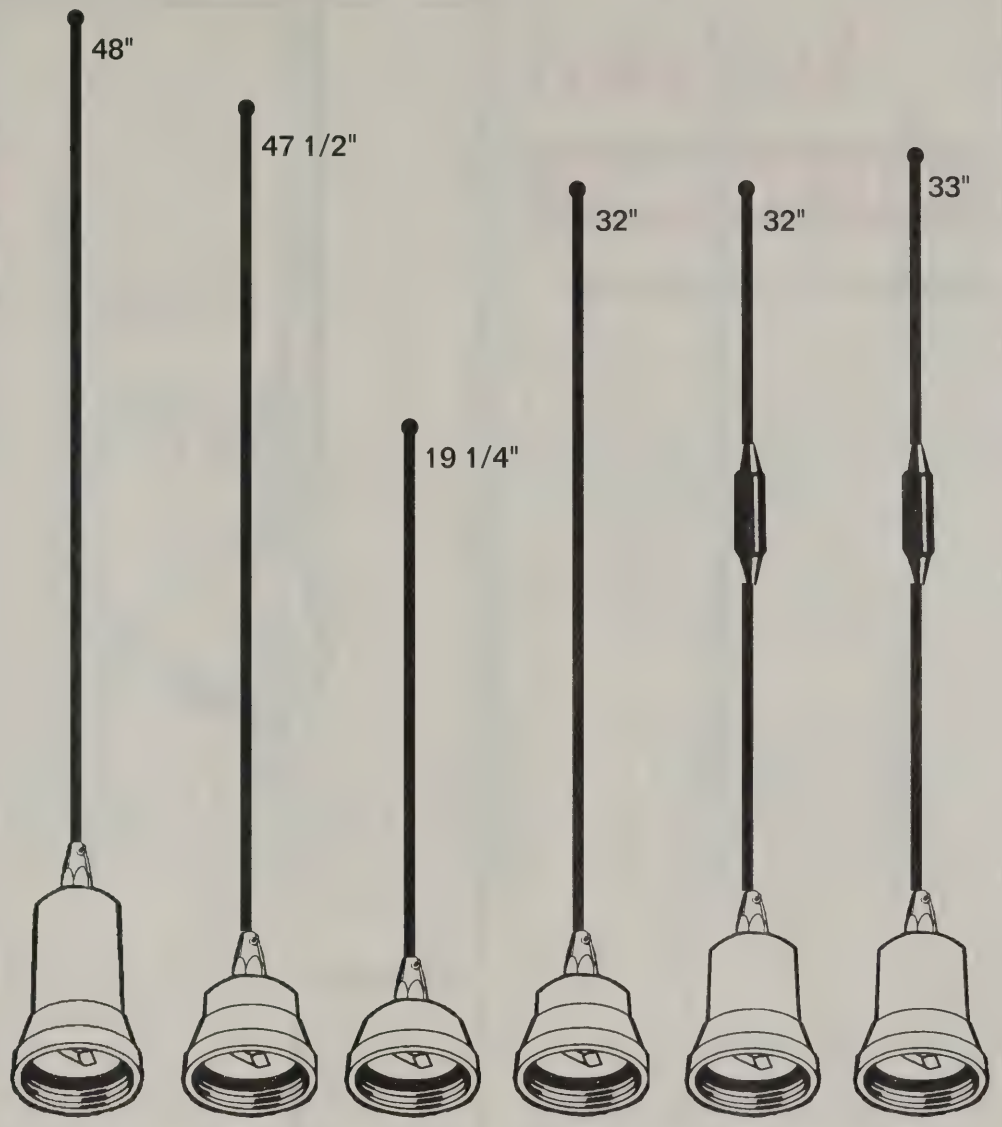
Larsen®

NMO Series

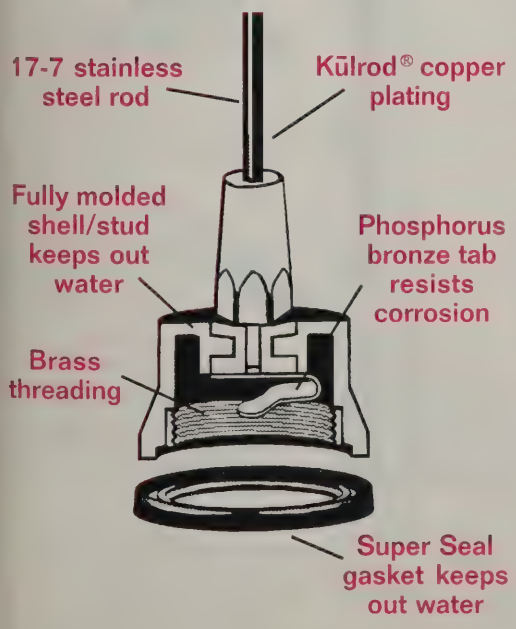
Kūlrod® Mobile Antennas

All Larsen mobile antennas meet the industry's most demanding specs for electrical efficiency and mechanical durability. The result is greater transmit range over many years of service. In addition to the popular Motorola 3/4" (NMO) mounts shown here, mobile antennas for the Larsen Mount (LM) and PO Mount (PO) are excellent choices for amateur use.

- VSWR at 1.5 to 1 or less
- Greater transmit range
- Rated 200 watts output
- 3 year No-Nonsense Warranty™
- 3/4" Motorola Style mounts
- Colors: Gray base/Chrome whip or all black
- Mounts:
  NMO K premium quality roof-top
  NMO MM mag mount, 90# pull strength
  NMO TLM heavy duty trunk lid
  NMO TMB electropolished trunk gutter bracket



Model NMO 440



Model	NMO 27 (10m)
Band	27-30 MHz
Electrical	1/4 wave, loaded
Gain	Unity

Model	NMO 150 (2m)
Band	144-174 MHz
Electrical	5/8 wave
Gain	3 dBd

Model	NMOQ Spec
Band	144-448 MHz
Electrical	1/4 wave
Gain	Unity

Model	NMO 220 (1.25m)
Band	220-225 MHz
Electrical	5/8 wave
Gain	Unity

Model	NMO 440 (70cm)
Band	440-460 MHz
Electrical	5/8 over 1/2
Gain	4.5 dBd

Model	NMO 2/70 (Dual)
Band	144-148; 442-448 MHz
Electrical	5/8 wave VHF Collinear UHF
Gain	4 dBd UHF 2.4 dBd VHF

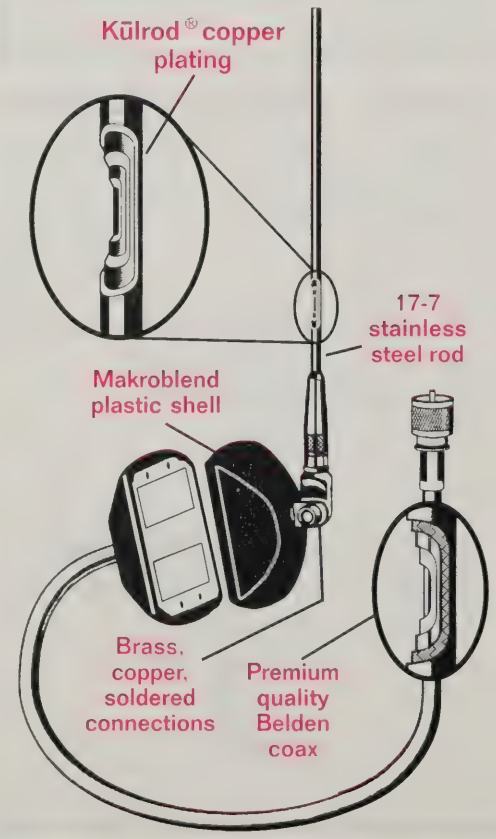
Larsen®

KG Series

Külglass® Antennas

Larsen's advanced design techniques in glass mount antennas result in superior transmit range plus tremendous mechanical durability. Today the glass mount design's performance is nearly identical to rooftop mounts, with no holes to drill. Properly installed on-glass antennas grip for years under demanding conditions, yet are easy to remove and remount.

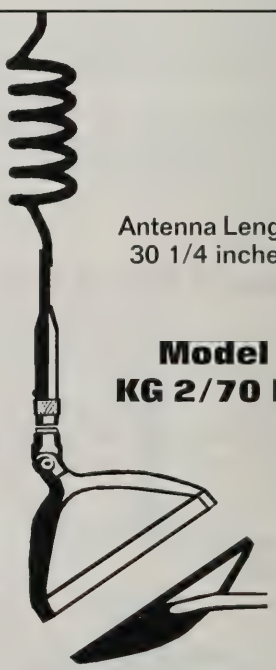
- Patented low-impedance design is more efficient electrically
- Greater transmit range
- Transformer located outside vehicle
- Copper plated whips emit more RF
- Rated 50 watts output
- VSWR at 1.5 to 1 or less
- Less than .5 dBd loss through glass vs rooftop
- New circuit board technology locks in solid state performance
- 3M's best on-glass adhesive grip
- 3 year No-Nonsense Warranty™



Model KG 144 PL (2m)
NEW SOLID STATE COUPLER
Band 144-160 MHz
Electrical 1/2 wave
Gain 2.4 dBd
Connector PL 259, (Loose)

Model KG 220 PL (1.25m)
Band 220-224 MHz
Electrical 1/2 wave
Gain 2.4 dBd
Connector PL 259, (Loose)

Model KG 440 PL (70cm)
Band 440-460 MHz
Electrical 1/2 wave
Gain 2.4 dBd
Connector PL 259, (Loose)



Model KG 2/70 PL (Dual)
NEW SOLID STATE COUPLER
Band 144-148; 440-450 MHz
Electrical 1/2 wave VHF
Collinear UHF
Gain 2.4 dBd VHF; 4.5 UHF
Connector PL 259, (Loose)

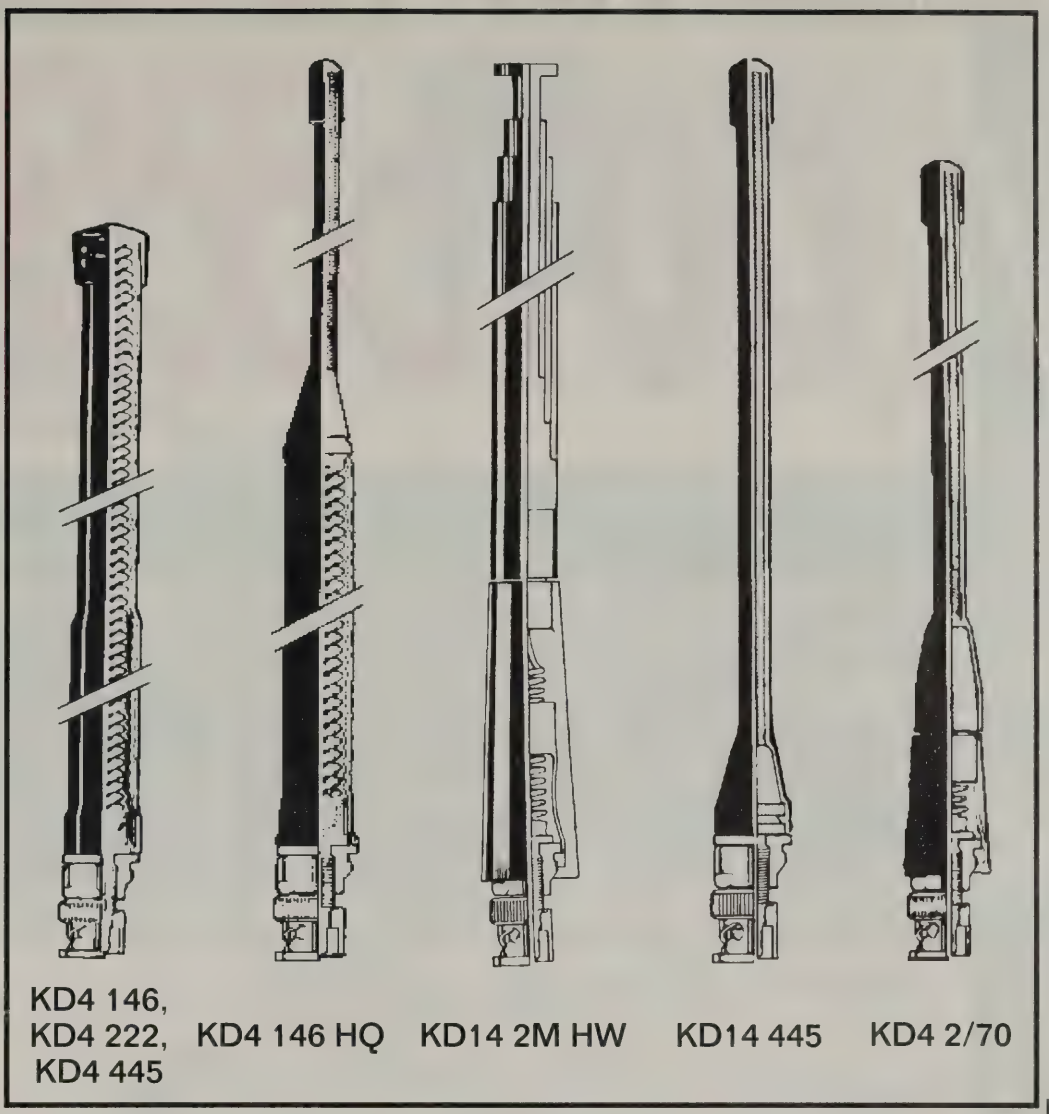
Larsen®

KD Series

Külduckie® Portable Antennas

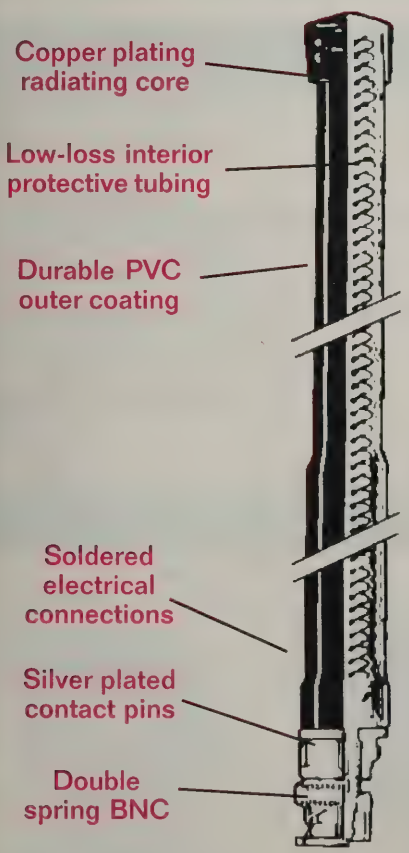
Superior transmit range and tough mechanical durability are the mark of Larsen portables. All center cores are of brass or copper plated steel (not plain steel) to maximize RF emission. Fully soldered connections and silver plated components improve electrical efficiency. Double spring BNCs reduce wear on your radio mount.

- VSWR at 1.5 to 1 or less
- All are scope tuned to precise frequency
- Special models for 35 ohm ICOM radios
- Dozens of model and connector options
- 3 year No-Nonsense Warranty™



KD4 146, KD4 222, KD4 445 | KD4 146 HQ | KD14 2M HW | KD14 445 | KD4 2/70

Model KD4 146 Helical



Model KD4 146 (2m)
Band 144-148 MHz
Electrical 1/4 wave
Height @ 8"

Model KD4 146 HQ (2m)
Band 144-148 MHz
Electrical 1/4 wave
Height @ 10.5" & 11.5"

Model KD14 2M HW (2m)
Band 144-148 MHz
Electrical 1/2 wave, telescoping
Height @ 8.5" to 42"

Model KD4 222 (1.25m)
Band 222-224 MHz
Electrical 1/4 wave, helical
Height @ 5"

Model KD4 445 (70m)
Band 442-448 MHz
Electrical 1/4 wave, helical
Height @ 3"

Model KD14 445 (70m)
Band 442-448 MHz
Electrical 1/4 wave, full
Height @ 6.5"

Model KD4 2/70 (70m)
Band 144-148; 442-448 MHz
Electrical 1/4 wave loaded, VHF
1/4 wave, UHF
Height @ 8"

The Complete HF Mobile Antenna System

OUTbacker

• ONE ANTENNA DOES IT ALL • LOW SWR • WIDE BANDWIDTH • BUILT TO LAST • SHEER MOBILING ENJOYMENT

It's plug-n-play, mate!

Whether in the city…

in the country…

or backpack portable.

OUTBACKER links your rig to the world.

- **Outbacker Classics** OB8: 6 ft. tall. 80-10m plus WARCs. 300 watts PEP. 3/8-24 thread. Ideal for all applications. OBS8: Same specs. Splits in two sections. Easy to store. OB8TRI: Same specs. Splits in three sections. Backpacker's delight. OB8HP: 500 watt PEP version. OBM: Ham/Marine combo. Popular Ham bands PLUS marine ITU bands.
- **Outbacker Perth** 7.5 ft. tall. 80-10m plus WARCs. 150 watts PEP. 3/8-24 thread. 3.5 ft. stinger retracts into 4 ft. mast for garaging or trunk storage. Superb performance. Perfect for trunk mounting. Low wind resistance.
- **Outbacker Jr.** OBJR8: 4 ft. tall. 80-10m plus WARCs. 150 watts PEP. 3/8-24 thread. Terrific for hatchback or roof mounting and RV's.

OUTBACKER MODEL DESCRIPTIONS AND PRICING

Standard models with 8 bands — 75m-40m-30m-20m-17m-15m-12m-10m — All with standard 3/8-24 threads, all models black.

	Description	Model #	Price
OUTBACKER PERTH	newest OUTBACKER • highest performer • 4 ft. shaft with 3 ft. stinger low wind resistance • 150 watt P.E.P.	Model Perth	$269.00
OUTBACKER 8	6 ft. 300 watts P.E.P.	Model #OB8	$259.00
OUTBACKER HP	6 ft. 500 watts P.E.P.	Model #OB8HP	$289.00
OUTBACKER SPLIT	6 ft, 300 watts P.E.P., breaks down into 2 -3 ft. sections for easy storage storage pouch included	Model #OBS8	$289.00
OUTBACKER TRI-SPLIT	same as OUTBACKER SPLIT except breaks down into 3-2 ft. sections, storage pouch included	Model #OB8TRI	$319.00
OUTBACKER MARINER	includes ham bands 75m-40m 20m-15m-10m and ITU bands 2.182MHz - 4.1MHz - 6.2 MHz - 8.2 MHz -12.4MHz - 16.5 MHz - 22.1MHz	Model #OBM	$389.00
OUTBACKER JR	4 ft. 150 watts P.E.P.	Model OBJR8	$229.00
OUTBACKER SPRING & BASE	3/8-24 threads only, spring construction is zinc-plated spring, steel base is nickel-plated machined brass and SO-239 RF termination. Requires 1/2" hold for mounting		$69.00

Call us for details and ask about the OUTBACKER information video.

Nathan, KN4BJ
Orlando, FL 1-800-327-1917

Harold, AA7UL
Las Vegas, NV 1-800-634-6227

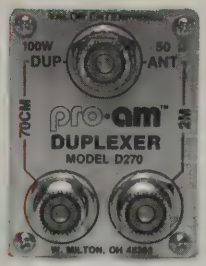
Phil, WD8AAN
Wickliffe, OH 1-800-321-3594

John, AB9G
Milwaukee, WI 1-800-558--0411

pro·am™

by Valor®

"The Clear Connection"



2m/70cm Duplexer

Model D-270 • Connects a VHF/UHF dual band antenna with a single feedline to separate 2m and 70 cm transceivers or a dual band transceiver without a built-in duplexer. Use in reverse for connecting separate antennas to a 2m/70cm dual band transceiver with only one RF output.

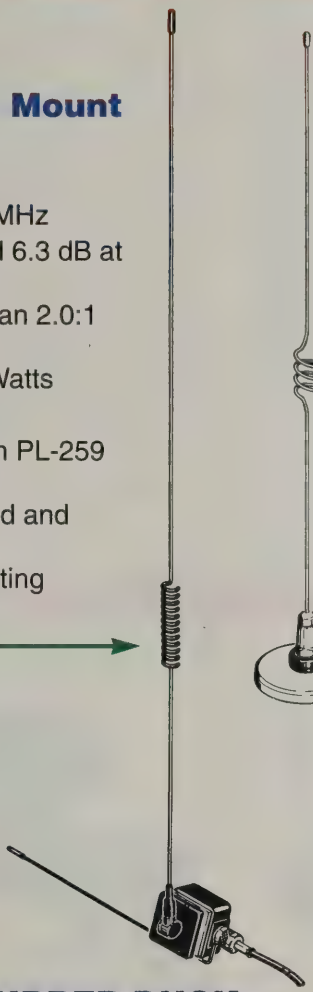
$39.95

144/440 Dual Band Glass Mount Antenna

Model GM270

- 144-148 and 440-450MHz
- Gain: 2.6dB at 2m and 6.3 dB at 70cm
- Typical VSWR: less than 2.0:1 through the bands
- Maximum power: 50 Watts
- Field tunable
- 14 ft. RG-58 cable with PL-259 connector
- 26" whip–copper plated and black finished
- Instructions and Mounting Hardware Included

$49.95



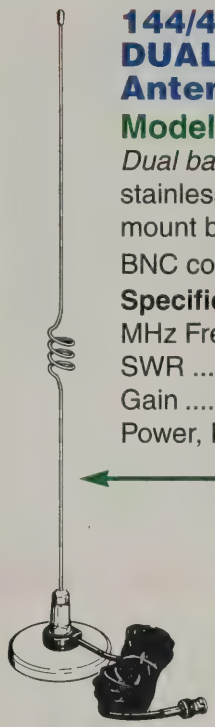
144/440 DUAL BAND Magnet Mount Antenna

Model PM-144-440BN

Dual band Antenna Kit: Includes 19 inch stainless steep whip, *powerful* 3 inch magnet mount base, 12 ft. of RG-58 coax cable and BNC connector.

Specifications	2 meter	UHF
MHz Frequency	144-148	435-450
SWR	<2:1	2:1
Gain	Unity	2.1 dBi
Power, FM	150 watts	150 watts

$29.95

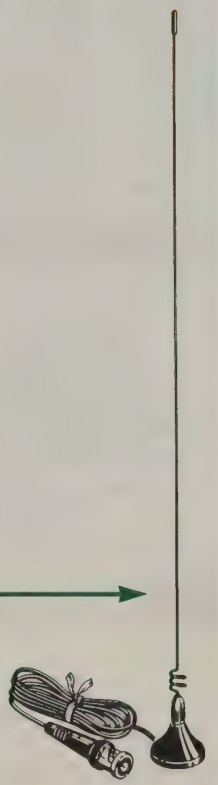


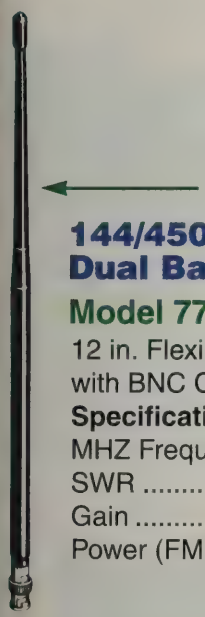
144/440 DUAL Band Magnet Mount Antenna

Model MM-270B

- 144-148 and 440-450MHz – 1/4 wave length (2m) and 5/8 wave length (70 cm).
- Typical VSWR: less than 1.5:1 through the bands.
- Maximum power: 50W (2m), 25W (UHF)
- 1-1/8" diameter black ABS base with *strong* Rare Earth magnet
- Height: less than 20 in.
- Brass ferrule, black chrome finished
- 9 ft. RG-174 cable with BNC Connector
- Weight: 2 ounces

$39.95





144/450 Dual Band RUBBER DUCK

Model 77-BNC

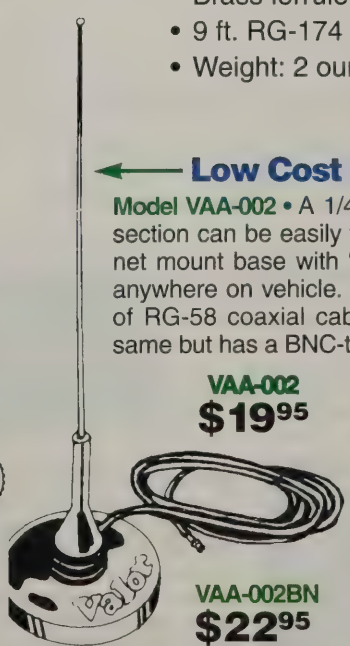
12 in. Flexible Rubber Duck Antenna with BNC Connector

Specifications	2 meter	UHF
MHZ Frequency	144-148	435-450
SWR	<2:1	2:1
Gain	Unity	2.1 dBi
Power (FM)	50 watts	50 watts

$23.90

Low Cost 2 meter Magnet mount Antenna

Model VAA-002 • A 1/4 wavelength on 2 meters, but the stainless steel whip section can be easily trimmed for operation up to 450MHz. The *strong* magnet mount base with "no scratch" rubber boot for protection mounts almost anywhere on vehicle. Rated for 200 watts and comes ready-to-go with 12 ft. of RG-58 coaxial cable and PL-259 connector. **Model VAA-002BN** is the same but has a BNC-type connector for direct connetion to handhelds, etc.



VAA-002
$19.95

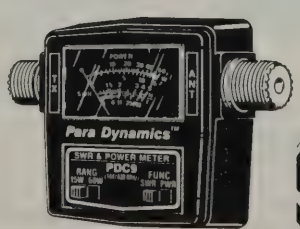
VAA-002BN
$22.95

UHF/VHF SWR/Power Meter

Model PDC9

- RF Power: 0-50W and 0-60W
- Freq. Range: 140-170MHz 430-450MHz
- UHF female
- Size: 2¼"h x 2½"w x 1⅛"d

$49.95

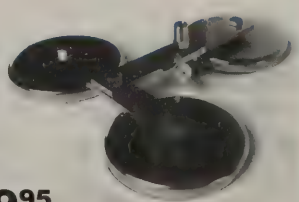


Maxi-Magnet Mount Kit

Model MM-3401

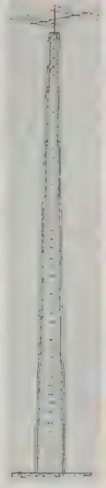
Strong! Includes three big 5" magnets on a heavy aluminum frame with 3/8" x 24-thread mount, 17 ft. RG-58 cable and PL-259 connector.

$49.95



Towers & Rotors . . .

ROHN Towers



Heavy Duty or Extra Heavy Duty for HAM RADIO applications

Rugged, all Steel Construction • "X" Brace for greater strength • Galvanized finish for long life • Tower can be fully assembled on the ground and hinged up, or built vertically, section by section • Load is rated for Free Standing, no guy wires* • Supplied with Base Stubs for concrete mounting, and Rotator Plate.

Model	Ht.	Windload	Weight
HBX-40	40 ft.	10 sq. ft.	228 lbs
HBX-48	48 ft.	10 sq. ft.	303 lbs
HBX-56	56 ft.	10 sq. ft.	385 lbs
HDBX-40	40 ft.	18 sq. ft.	281 lbs
HDBX-48	48 ft.	18 sq. ft.	363 lbs

See Rohn in the Price List

*IMPORTANT: ROHN states that "antennas developing a large twisting moment due to wind must not be used on these towers". Antennas should be limited to those having a maximum boom length of not more than 10 ft.

Milwaukee Pick-up or Drop-Shipped from Factory

U.S. Tower

Featuring a large selection of Self-Supporting Crank-up towers for almost any height and strength requirement. Three compact models…**TMM-series**, six standard models…**TX-series**, and five heavy-duty models…**HDX-series.** Also, seven tubular crank-up models…**MA-series**. Plus, a full complement of accessories for various installations

Factory Drop-Ship

See U.S. Tower
in the Price List and also check the Index

UNIVERSAL Towers

UNIVERSAL Model 18-50
50 ft. self-supporting aluminum tower shown installed at the QTH of W9NHE in Milwaukee Wisconsin

FREE STANDING ALUMINUM TOWERS
LIGHTWEIGHT • RUST FREE
EASY TO ASSEMBLE & INSTALL
RUGGED • HAM RADIO, TV/FM

Configurations available from 30-100 ft. with various wind load selections to meet almost any application. Self-Supporting – no need for unsightly guy wires at rated load.

Factory Drop-Ship

See Universal
in the Price List and also check the Index

HY-GAIN Antenna Rotators & Towers

AR-40 CD-45-II HAM IV T^{2}X HDR-300

AR-40 (lightweight) • For large TV/FM and smaller Ham Antennas up to 3.0 sq. ft. windload area when mounted in-tower, or 1.5 sq. ft. mast mounted with supplied lower support bracket. Rotor unit: 17⅜"h x 8" diameter, 12 ball bearings (two races), disc brake, mast sizes up to 2¹⁄₁₆" diameter. Automatic, silent control box - just dial and touch for desired direction. Use Belden 8448 control cable. 14 lbs .... **HYG 305 $199.95**

CD-45-II (medium duty) • For antennas with up to 8.5 sq. ft. windload area when mounted in-tower, or 5 sq. ft. when mast mounted with supplied lower support bracket. Rotor unit: 17⅜"h x 8" diameter, 48 ball bearings (two races), disc brake, mast sizes up to 2¹⁄₁₆" diameter. Illuminated directional indicator, separate snap action brake and rotation switches. Meter face may be reversed for N or S center scale, as desired. Use Belden 8448 control cable. 20 lbs .... **HYG 302 $279.95**

HAM IV (Heavy Duty) • For medium-sized antenna arrays with a windload area up to 15 sq. ft. when mounted in-tower, or 7.5 sq. ft. when mast mounted with *optio nal* lower support bracket. Rotor unit: 13½"h x 8" diameter, 98 ball bearings (two races), electric locking steel wedge brake. Mast sizes up to 2¹⁄₁₆" diameter. Illuminated indicator, separate snap action brake and rotation switches, north or south center scale - in unit. Use Belden 8448 control cable. 24 lbs **HYG 304 $369.95**

T^{2}X Tailtwister (EXTRA HEAVY DUTY) • For larger antenna arrays with a windload area up to 20 sq. ft. when mounted in-tower, or 10 sq. ft. when mast mounted with *optional* lower support bracket. Rotor unit: Extra rugged casting–14¹⁄₁₆"h x 9⁵⁄₁₆" diameter, 138 ball bearings (3 races), electric locking steel wedge brake. Mast sizes up to 2¹⁄₁₆" diameter. Illuminated directional indicator, separate snap action brake and rotation control switches, north or south center scale - in unit. Use Belden 8448 control cable 28 lbs. .... **HYG 303 $429.95**

HDR-300 (Deluxe Extra Heavy-Duty) • For large antenna arrays up to 25 sq. ft. windload (**in-tower mount only**). Rotor: 7"x 9" x 10"h, 138 ball bearings (3 races), solenoid operated locking brake. Masts up to 3" in dia. Digital directional indicator accurate to 1˚. Separate brake and rotation controls. Use Belden 848 control cable. 55 lbs...................... **HYG 300 $949.95**

HY-GAIN Steel Crank-up Towers
Four Models available: 37, 52, 54 and 70 ft.
Factory Drop-Ship

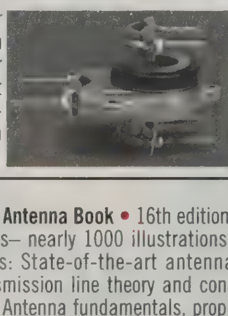
HY-GAIN HF • VHF • UHF Antennas
Full line available from Stock!
See HY-GAIN in the Price List

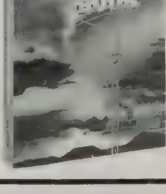
PHILLIPS Antenna Rotator

U-105 Antenna Rotator • The drive unit features a durable, one-piece cast aluminum housing, large bearing surfaces, reinforced mast support for latreral loads, and a ball bearing for the thrust (vertical) load. Precision-cut, hardened steel drive train and high torque– well equipped to turn and accurately position small to medium VHF/UHF amateur and the largest TV/FM arrays. Control unit is smooth and quiet, synchronized with the drive unit by synchronous motors. ...**$69.95**

Rotation Range	360° +5°-0	**Support Mast Size**	1-1/8–2" dia.
Rotation Time	70 Seconds	**Control unit**	7"w x 5⅞"d x 2⅜"h
Rotation Torque	8 ft./lbs.	**Weight** (Rotator +control)	10 lbs
Max. Vertical load	100 lbs.	**Control cable** (4-wire)	Belden 8484

TB-105 Support Bearing • For extra-sturdy installation when using the U-105. Relieves wear and tear on the drive unit imposed by wind loads; incorporates an all ball bearing design and weather-tight seal **$18.25**





The ARRL Antenna Book • 16th edition, 700 pages– nearly 1000 illustrations! Discusses: State-of-the-art antenna and transmission line theory and construction. Antenna fundamentals, propagation, transmission lines, yagis, quads, wire antennas. Antennas for limited space, portable, mobile, VHF, UHF and microwave and space ..**$20.00**

Special YAESU Rotators

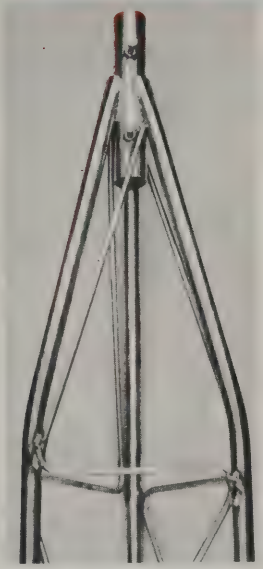
The full YAESU Rotator line is shown in the Center Spread and in the Price List.

YAESU G-5400B Azimuth-elevation Rotator (left) • For satellite, moonbounce and other space communications work where both horizontal and vertical rotation of the antenna is required in a single unit. Full 180˚ rotation. Elevation rotation time: 58 seconds; 360˚. Azimuth rotation time: 50 seconds. Handles 440 lbs of vertical load and mast diameters from 2"–2½" Control box has large dual meters which show separate azimuth and elevation indication with a ±4% aiming accuracy. Use Belden 8448 control cable. .... ☎ CALL

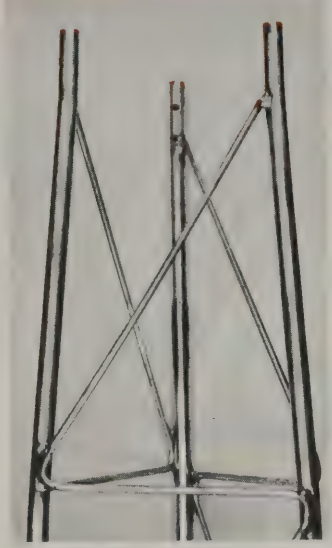
YAESU G-500A Elevation Rotor (right) • For satellites, moonbounce work, etc.! 180˚ elevation rotation takes 60 seconds. Large meter – aiming accuracy ±3%. Accepts boom diameters 1¼"–1⅝". Use Belden 8448 control cable. .... ☎ CALL

New! **AEA ST-1 Satellite Tracker Hardware and Software for Yaesu 5400/5600 Azimuth-elevation rotators** • Works with InstantTrack, QuickTrack, and RealTrack software; tunes **FT-736R**, **TS-790**, **IC-970**, and the **IC-475/275** combination transceivers. Provides automatic control of antennas and transceiver tuning to simplify satellite operation. As a satellite nears the horizon, antennas are pointed in the proper direction and the rig is tuned to the right up-link/down-link frequencies. As the satellite moves along its path, the antennas track and the transceiver tuning is corrected for the Doppler shift. Uses one serial port and parallel port from host computer, works with other software, like PG-AEA, PB and PG **$369.95**

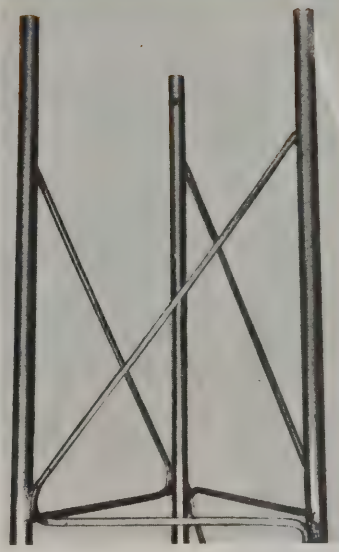
UNIVERSAL TOWERS



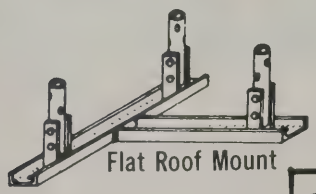
TOP SECTION



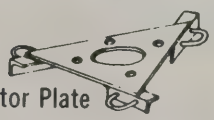
TAPER SECTION



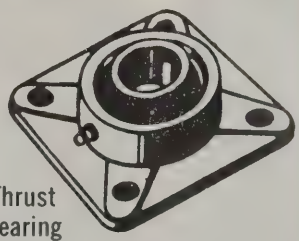
STRAIGHT SECTION



Flat Roof Mount

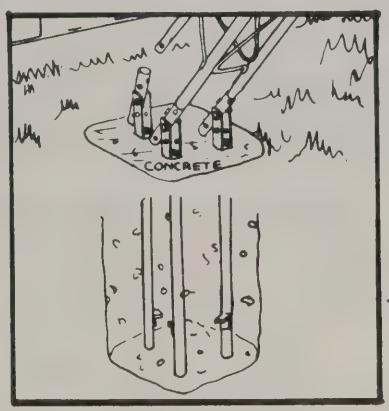


Rotor Plate



Thrust Bearing

Base Legs



Base Legs installed in concrete showing Hinge-Over feature.

Top Section with Thrust Bearing Plate

Here's a 50 ft. UNIVERSAL Self-Supporting Aluminum Tower installed at the QTH of Ted Willett W9NHE. This set up made a Big difference - he really gets out!

Before you buy a tower consider the advantages of Aluminum - it's Strong, Lightweight, Rust Free and easy to assemble and erect.

UNIVERSAL offers 10 ft. sections or complete towers ranging from 30 to 100 ft. with a choice of wind load ratings and accessories to meet your specific needs.

A listing and description of UNIVERSAL TOWERS is shown in the Price List. For more info fill out and mail the Coupon along with $1.00 to receive their latest Catalog. ⟶

To: **AMATEUR ELECTRONIC SUPPLY®**
5710 W. Good Hope Road
Milwaukee, WI 53223

Enclosed is $1.00 . . please send me the latest UNIVERSAL TOWERS Catalog.

Name _____

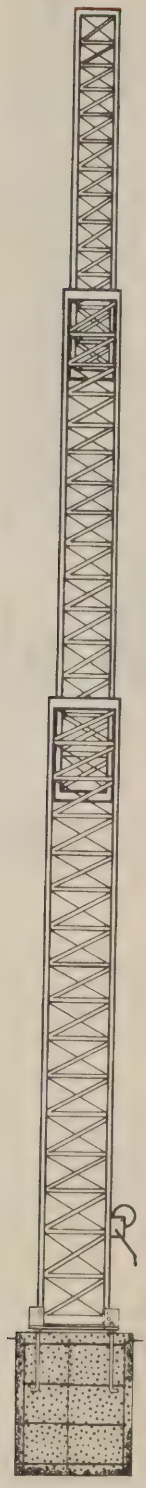
Ham Call (if any) _____

Address _____

City _____

State _____ Zip _____

Full line of Accessories including: • Tower Motor Drives • 5' to 20' Antenna Masts • 20' Chromolly Masts • Thrust Bearings • Mast Raising Fixtures • Rotating bases • Coax arms • Limit Switch Packages



MA SERIES (CRANK-UP TUBULAR TOWERS

Will handle 10 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bottom	BASE SIZE	AES PRICE
MA-40	40 ft.	21'6"	2	242	3" sq.	4½"	2'x2'x4'	$ 679.
MA-550	55 ft.	22'1"	3	435	3" sq.	6"	1½'x1½'x1½'	1069.
MA-550MDP*	55 ft.	22'1"	3	620	3" sq.	6"	3'x3'x5'	2618.
MA-770	71 ft.	22'10"	4	645	3" sq.	8"	3'x3'x6'	2258.
MA-770MDP*	71 ft.	22'10"	4	880	3" sq.	8"	3'x3'x5½"	3572.
MA-850MDP*	85 ft.	23'6"	5	1128	3" sq.	10"	4'x34'x6'	4814.

Standard bases and eve mounts included with all towers (except MA-770, 770-MDP and 850 MDP) • MDP models complete with heavy-duty motor drive with positive pull down.

FREE STANDING CRANK-UP TOWERS

Will handle 18 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bottom	BASE SIZE	AES PRICE
TX-438	38 ft.	22'	2	355	12½"	15"	3'x3'x5'	$1019.
TX-455	55 ft.	22'	3	670	12½"	18"	3'x3'x6¼"	1539.
TX-472	72 ft.	22'8"	4	1040	12½"	21⅝"	4'x4'x7'	2529.
TX-472MDP*	72 ft.	22'8"	4	1210	12½"	21⅝"	4'x4'x7'	4068.
TX-489	89 ft.	23'4"	5	1590	12½"	25⅝"	4'x4'x8⅙"	4399.
TX-489MDPL*	89 ft.	23'4"	5	1800	12½"	25⅝"	4'x3'x8⅙"	6598.

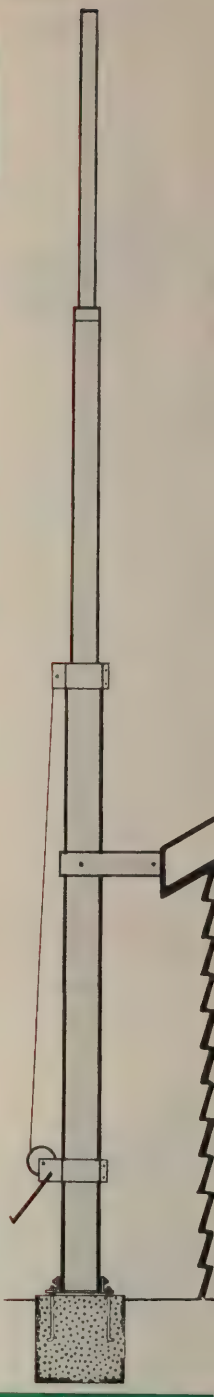
*TX-472MDP includes heavy duty motor drive with positive pull down. TX-489MDPL comes with heavy duty motor drive with dual level wind and positive pull down. MDPL models include fully operational limit switch packages.

FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

Will handle 30 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bottom	BASE SIZE	AES PRICE
HDX-538	38 ft	21'6"	2	600	15"	18"	3'x3'x6¼'	$1319.
HDX-555	55 ft	22'	3	870	15"	21⅝"	4'x4'x6½'	2309.
HDX-572	72 ft	22'8"	4	1420	15"	25⅝"	4'x4'x8⅙'	3959.
HDX-572MDPL*	72 ft.	22'8'	4	1600	15"	25⅝"	4'x4'x8⅙'	6048.
HDX-589MDPL*	89 ft.	23'8"	5	2440	15"	30⅝ "	5'x5'x8½'	7919.
HDX-689MDPL*	89 ft.	23'8"	5	3450	18"	37⅛"	5'x5'x9½'	15,299.
HDX-5106MDPL*	106 ft.	24'8"	6	3700	15"	37⅛"	5'x5'x9½'	16,649.

*Includes heavy-duty motor drives with dual level wind and positive pull down. MDLP models include fully operational limit switch packages. *HDX-689MDPL rated 60 sq. ft. of antenna at 50 mph winds. * HDX-5106MDPL rated at 35 sq. ft. of antenna at 50 mph winds.

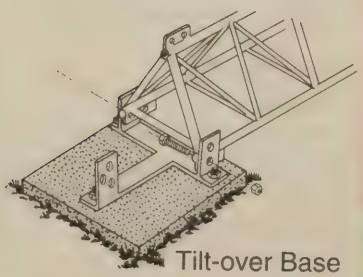


Complete list of accessories shown in the Price List

FREE STANDING "Low Profile" COMPACT CRANK-UP TOWERS

Will handle 18 sq. ft. antennas at 50 MPH winds. (TMM-443HD - 24 Sq. ft.)

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TMM-433SS*	33 ft.	11'4"	4	315	10"	18"	3¼'x3'x6'	$1089.
TM-433HD	33 ft.	11'4"	4	400	12½"	20⅞"	3'x3'x5¾'	1319.
TMM-541SS	41 ft."	12'	5	430	10'	20⅞"	3'x3'x5⅓'	1429.



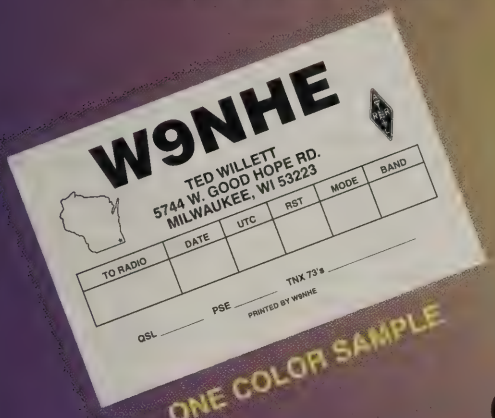
Tilt-over Base

You may obtain a detailed U.S. Tower Catalog by sending a request and $1⁰⁰ to Amateur Electronic Supply • 5710 W. Good Hope Road. Milwaukee, WI 53223

STERMAN PRINTING

DIVISION OF AMATEUR ELECTRONIC SUPPLY

5744 W. GOOD HOPE RD. • MILWAUKEE, WI 53223 • (414) 358-4099 • FAX (414) 358-4094



QSL CARDS

ONE-COLOR TO FULL COLOR QUALITY CARDS

QSL Cards 3-1/2 x 5-1/2 are printed on 10 point coated white stock, in your choice of black, red or blue ink. Each card may include 2 pieces of stock artwork. Options: your home state, ARRI member logo, an antenna, or the American Flag.

Printed On 10 Point White Coated Stock

QSL CARD ORDER FORM

Make Checks Payable to Sterman Printing

PLEASE PRINT EXACTLY AS IT IS TO APPEAR ON CARDS

YOUR CALL:_____ GRID SQUARE NO.: _____

NAME:_____

ADDRESS:_____

CITY:_____ STATE: _____ ZIP:_____

TELEPHONE NO: _____ DATE:_____

PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose 2)

☐ ARRL LOGO	☐ BLACK	☐ 100 - $22.50
☐ STATE LOGO	☐ RED	☐ 250 - $29.50
☐ ANTENNA LOGO	☐ BLUE	☐ 500 - $35.50
☐ USA FLAG LOGO		

☐ I am sending *additional* clean black & white art (5X7 or less).
Bill me $10.00 each for additional piece(s) of artwork.

☐ 2 COLOR CARDS - **ADD $22.00 TO BASE QUANTITY PRICE**
(Please designate color breaks)

☐ CUSTOM CARD - 4 COLOR – CALL FOR A QUOTE!

☐ Check ☐ Mastercard ☐ Visa ☐ American Express

Card Number_____ Exp. Date_____

Signature_____ Date_____

– ALSO –
LET US GIVE YOU A QUOTE ON YOUR BUSINESS PRINTING NEEDS!

Amount of Card Order: _____

2-color Print Option: _____

Unique Logo (send art): _____

Sales Tax (applicable in WI, OH, FL & NV): _____

Shipping & Handling: 3.50

TOTAL: $ _____

AMATEUR ELECTRONIC SUPPLY®

Used Amateur Radio Equipment List

★ Fully Service Tested ★ 10 Day Trial ★ 30 Day Guarantee ★ Full Credit within 90 Days on Higher Priced New Equipment ★ Only Clean Gear accepted in Trade ★ The Finest available ... anywhere!

Note: This Used Equipment List reflects what was in our inventory when this catalog was printed. We trade, buy and sell a tremendous amount of used equipment, so this is only a representation of what may be available at any given time. Each store (except Clearwater) has immeadiate on-line computer access of the entire AES used gear inventory by location–one phone call is all that is needed to see if an item is in stock. The letters after the price indicate which location had the particular item at the time of inventory: **m** = Milwaukee; **w** = Wickliffe; **f** = Orlando; **c** = Clearwater; **v** = Las Vegas. + after item denotes too many accessories to list.

ACE
OPTO-IAMBIC keyer $29 m
AEA
IsoLoop 10-30 ant. $249 m
ALINCO
DJ-120T 2m HT $159 m
DR-112T 2m mob 279 f
DR-600T 2m/70cm 489 m
ALPHA DELTA
MACC outlet box $29 w
AMERITRON
AL-80A HF amp $749 w
AL-811 HF amp 479 m
ASTATIC
TUG8-D104 mic $59 f
BENCHER
BY-1 paddle $49 w
BIRD
4273-100 sampler $79 m
CES
SDI-50 patch $299 v
CONNECT SYSTEMS
CS-700 patch $239 m
DAIWA
CNW-419 ant tuner $149 c
DRAKE
MN-4 tuner $69 f
MS-7 speaker 29 m
PS-7 p/s 149 m
PS-7 p/s w/fan 159 m
TR-7 hf xcvr/swl 479 mv
TR-7 hf xcvr/fan 489 m
TV-3300LP low pass 15 m
7073 hand mic 19 m
GRUNDIG
SATELLIT 700 swl $329 m
HEIL
HM-10-K5 Hand mic $69 c
HY-GAIN
2400-155 contester $59 m
ICOM
AD-15 p/s $29 m
AH-2A auto. tuner 369 mwv
AT-100 ant. tuner 289 mc
AT-150 ant. tuner 359 m
AT-500 ant. tuner 399 w
BA-12 battery adapt 12 w
BC-72 charger 79 w
BC-73 charger 39 w
BP-3 battery 25 w
BP-4 battery holder 12 w
BP-82 battery 39 w
BP-83 battery 49 w
BP-85 battery 89 w
BP-7 5w battery 49 w
CM-12 battery holder 12 w
CP-11 cig cord w/flt 16 w
EX-202 lda interface 9 m
EX-767pwr conn/901 19 f
FL-70 filter 29 w
HS-10 headset/mic $15 wv
HS-15SB switchbox 15 v
HS-51 headset 39 w
IC-W2A 2m/440 HT 399 w
IC-W21AT 2m/440 399 w
IC-2KL HF amp 1359 m
IC-120 1.2 ghz mob 269 m
IC-2SRA 2m/rcvr 399 mw
IC-229H 50w/2m 299 m
IC-2500 440/1.2 669 mwv
IC-4KL HF amp 4499 m
IC-27A 2m 25w mob 259 mv
IC-271H 2m base 769 f
IC-271H w/ps voice 949 w
IC-28A 2m 25w xcvr 279 w
IC-275A 2m xcvr 879 m
IC-275H 2m xcvr 1089 m
IC-47A 440 mobile 279 w
IC-471A 440 xcvr 599 m
IC-471H 75w/ps 899 m
IC-575H 6m xcvr 999 m
IC-725 HF xcvr 629 mwf
IC-728 HF xcvr 719 v
IC-730 xcvr 489 m
IC-735 HF xcvr 719 m
IC-751 HF xcvr 799 m
IC-751A HF xcvr 959 m
IC-737 HF xcvr 1099 m
IC-761 HF xcvr 1399 v
IC-761 w/voice 1429 m
IC-765 HF xcvr 1699 w
IC-781 HF xcvr 3999 m
LC-38 case 6 w
LC-40 case 14 w
LC-40 case 14 w
LC-43 case 14 w
LC-53 case 6 w
LC-56 case 6 w
LC-61 case 14 w
LC-66 case 9 w
MB-24 bracket 19 w
MB-32 mount brkt 9 v
MB-49 bracket 29 m
PP-1 phone patch 129 c
PS-15 power supply 119 wc
PS-20 power supply 139 c
PS-55 power supply 159 wc
PS-66 24/12v conv 499 m
PS-70 power supply 12 w
RC-12 remote/R7000 59 m
R-1 rcvr scanner 359 m
R-100 mobile rcvr 479 m
R-7000 receiver 829 m
R-71A receiver 689 mw
R-71A w/EX-257 719 m
R-71A w/RC-11 729 m
SM-6 desk mic 25 m
SM-20 desk mic 99 m
SP-3 speaker 49 m
SP-20 speaker 99 m
JPS
NRF-7 filter $199 m
JRC
NRD-525 rcvr $699 c
NRD-525 w/vhf + 1029 f
KENWOOD
AT-120 Ant tuner $79 w
AT-200 Ant tuner 99 w
AT-230 Ant tuner 149 w
AT-300 auto tuner 489 f
BC-11 desk chgr 69 w
BC-6 desk chgr 35 w
BC-7 desk chgr 75 w
DG-5 freq disp; 520S 99 w
DSP-100 DSP unit 449 f
HMC-1 headset/vox 19 w
HS-6 headset 39 w
KNB-7A 12v battery 59 w
LF-30A low pass fltr 39 w
MC-48B mic/TTP 49 m
MC-50 desk mic 49 f
MC-60A desk mic 99 m
MC-90 desk mic 169 v
PB-26 battery 39 f
PC-1 phone patch 69 m
PG-3E dc cord ht's 18 w
PS-30 p/supply 119 w
PS-31 p/s 139 m
PS-430 p/s 149 wc
PS-50 p/s 169 wf
R-2000 receiver 499 m
R-2000/vhf/dc kit 559 v
R-5000 receiver 699 mv
R-5000 w/VC-20 889 m
R-5000 w/CW-AM 899 f
SM-220 scope 249 m
SP-430 speaker 49 mc
TH-25AT 2m HT 229 w
TH-27A 2m HT 239 f
TL-922A HF ampl 1299 mfc
TM-221A 2m xcvr 269 f
TM-241A 220 xcvr 299 w
TM-2550A 2m xcvr 349 m
TM-2550A w/TU-7 - 369 w
TM-742A 2m/440/+ 629 v
TR-7930 2m xcvr/TU 289 mc
TS-130S xcvr 449 m
TS-140S xcvr 679 wv
TS-430S xcvr/1.8 579 m
TS-440S HF xcvr 849 m
TS-440S/AT xcvr 939 wc
TS-440S/AT w/1 filt 969 v
TS-440S/AT/2 filt/vs 1029 m
TS-450S w/2 filt 969 m
TS-520SE hf xcvr 399 w
TS-530S w/2 filters 569 f
TS-820S HF xcvr 499 m
TS-830S HF xcvr 649 mwc
TS-830S w/2 filters 739 f
TS-850S/AT HF xcvr 1359 m
TS-930S/AT xcvr $999 m
TS-940S/AT xcvr 1399 m
TS-940S/AT w/3 filt 1539 m
TS-940S/AT + 1569 m
TS-950SD HF xcvr 1999 m
TW-4100A 2m/440 389 m
UT-220S module 199 f
UT-28S module 219 w
UT-440S module 249 m
UT-50S module 239 f
VFO-820 remote VFO 89 f
MFJ
1022 active rx device $29 m
1040B preselector 69 w
1214PC interface 109 f
1272BYV tnc/sw 29 m
1278 multi/tnc 199 f
1305 5V p/supply 9 w
1312 12V p/supply 9 w
1312B 12V p/supply 9 f
1714 2m ht antenna 9 w
1730 2m antenna 9 m
1786 Super Loop 179 m
207 SWR analyzer 59 mf
208 2m analyzer 59 fv
262 dummy load 49 w
4114 power pack 39 m
482B keyer 69 w
624D phone patch 65 f
752 tunable ssb filter 69 wf
9020 20M qrp xcvr 119 m
9020 20M w/options 189 w
931 artificial ground 49 c
949D tuner 89 c
971 200W tuner 69 m
MIRAGE
B-23 2m 30W amp $89 m
KP-1/440 preamp 99 w
MP-1 wattmeter 99 m
NEWTON
GBS-2000 Sat test $249 w
NYE
ESK-001 cmos kyr $29 w
047-002 patch 89 m
PALOMAR
PT-340 Tuner-Tuner $69 f
PANASONIC
RF-B600 Receiver $359 w
RF-B65 Receiver 199 m
RF-4900 Receiver $269 m
SANGEAN
ATS-803A Receiver $149 m
ATS-808 Receiver 149 mv
SGC
SG-2000 HF xcvr $1199 v
SONY
AIR 8 aircraft rcvr $169 w
AN-102 active ant 59 m
AN-1 outdoor active 49 v
ICF-SW55 receiver 299 wc
ICF-SW7600 rcvr 179 v
ICF-2002 receiver 159 w
ICF-2010 receiver 289 wfv
ICF-7601 swl rcvr 89 m
ICF-7700 swl rcvr 139 m
PRO-80 scan rcvr 299 m
STANDARD
CLC-551 case; 558 $15 w
CMU-160 memory exp 19 w
C-5608DA 2m/440 629 w
STARTEK
15BG freq counter $139 f
1500 freq counter 99 f
TEN-TEC
444 1KW ampl/ps $799 f
561 CORSAIR II xcvr 739 m
562 w/1.8/.5/RS-232 1229 c
TRIMBLE
Transpak GPS rcvr $1999 m
UNIDEN
BCT-2 scanner $135 v
BC-70XLT scanner 99 w
HR-2600 10m xcvr 159 f
HR-2600 10m NEW 199.95 all
YAESU
CSC-29 case for ht $14 w
CSC-45 case for ht 14 w
CT-11 cable/FL-7000 12 w
FBA-3 battery 19 w
FC-707 ant tuner 89 m
FIF-232C interface 49 m
FL-7000 ss hf amp 1499 fv
FNB-17 battery 39 w
FNB-12S 5W battery 49 w
FP-700 power supply 179 v
FP-707 power supply 129 mv
FP-757HD power sply 219 mf
FP-800 HD p/s 219 mw
FRA-7700 indoor ant $39 m
FRG-8800 rcvr 529 m
FRG-8800/vhf conv 579 m
FT-101B HF xcvr 389 f
FT-2400H 2m 50w 299 mv
FT-411 2m HT 229 w
FT-415 2m HT 229 f
FT-6200 440/1.2 579 w
FT-736R 2m/430 1299 m
FT-707 HF xcvr 399 m
FT-747GX HF xcvr 549 m
FT-747GXw/remote 779 v
FT-757GX HF xcvr 669 m
FT-890/AT hf xcvr 1049 c
FT-767GX HF xcvr 1269 m
FT-901DM HF xcvr 569 c
FV-101Z remote VFO 99 m
FV-700DM rem VFO 79 m
MD-1B8 desk mic 89 mf
MH-19A2B mic 24 w
MW-1 wireless mic 79 m
NC-15 desk charger 79 w
NC-37 desk charger 79 v
YM-34 mic 19 w
YSK-4700 Keyboard 29 w
YSK-1L remote cable 29 w

This Used Equipment list and the Demo Equipment list on the next page were prepared from an actual inventory taken on 04/25/94. Availability and Prices are subject to change without notice. AES® is not responsible for typographical errors.

The New...
AES® Credit Card
use it to purchase used gear too! *(P. 156-157)*

A portion of the Used Gear Inventory at the Milwaukee Store

Checked out, bagged, ready to go!

Special Prices on New Equipment Open Cartons and Demos

The following is a list of brand New Equipment that has been demonstrated, on display or restocked. The cartons are no longer factory sealed, but each piece has been checked out in our service department and carries a 100% New Warranty. The letter after the price is the location at the time of inventory. **m** = Milwaukee; **w** = Wickliffe; **f** = Orlando; **c** = Clearwater; **v** = Las Vegas. Limited quantities – Order Now! Used equipment policies do not apply.

	Was	Special	
AEA			
DSP-2232 multimode controller	$ 899.95	$296.95	v
ISOLOOP 10-30 10-30 mhz antenna	329.95	296.95	m
ALINCO			
DJ-180T 2w 2m FM HT	$224.95	$199.95	m
DJ-580T 2m/440 FM HT	399.95	369.95	m
DR-112T 2m/45W mobile transceiver	329.95	299.95	v
DR-1200T 2m/25W data transceiver	274.95	265.00	f
DR-1200TH 2m/25W data transceiver	309.95	294.95	f
DR-590T 2m/440 mobile transceiver	499.95	479.95	f
EBP-6N 9.6V @ 450ma battery pack	56.95	34.95	m
EDC-49 battery chgr; EBP-20/22/24N	22.00	17.95	v
EME-4 earphone/microphone	29.95	26.95	v
EMS-8Z speaker mic	47.00	39.95	m
ESC-18 soft case;DJ180T w/EBP-20N	21.00	18.95	m
AMECO			
HP-75T 75ohm hi-pass filter.	$12.95	$9.95	v
TPA tunable preamp.	69.95	59.95	m
AMERITRON			
AL-811 600W amplifier Refurb	$589.95	$559.95	f
AL-811H 800W amplifier Refurb	719.95	679.95	f
ATR-15 antenna tuner	359.95	319.95	m
RCS-4 remote coaxial switch	124.95	112.95	f
ASTRON			
RS-20A 16A power supply	$ 99.95	$89.95	v
AZIMUTH			
WIZ-2 weather station	$ 239.95	$199.95	m
B&K			
2005A RF generator	$ 239.95	$199.95	m
2701 digital multimeter	49.95	44.95	m
2830 multimeter	219.95	189.95	m
2911 digital multimeter	74.95	64.95	m
B&W			
CSR-5G coax switch	$49.95	$44.95	f
FL-10/100 low pass filter (50Ω)	32.95	29.95	m
FL-10/1500/70 low pass filter (72Ω)	24.95	19.95	m
VS-300A antenna tuner 300W	99.95	89.95	f
BENCHER			
BY-1 iambic paddle	$69.95	$62.95	m
CES			
SDI-50 autopatch/controller	$489.95	$439.95	m
COBRA			
AN-8512 answering machine	$49.95	$39.95	f
AN-8526 ans machine w/cordless ph	129.95	114.95	m
AN-8532 answering machine	49.95	39.95	f
AN-8560 answering machine	39.95	32.95	f
CP-469S cordless phone	59.95	49.95	f
CP-703 cell style cordless phone	69.95	59.95	wf
COMET			
ML-7K ear/microphone; Kenwood	$79.95	$69.95	w
MS-3FVMM mag mt w/UHF conn	39.95	35.95	v
CONNECT SYSTEMS			
CS-700 Simplex interconnect	$299.95	$269.95	mv
CUSHCRAFT			
LAC-4 blitz bug ligntning arrestor	$36.95	$29.95	v
PS-4 polarity switch	114.95	89.95	m
DIAMOND			
MX-72D duplexer	$51.95	$46.95	m
D-130J 25-1000mHz disconne	89.95	79.95	v
GROTHE			
VS-3 volunteer vehicle PA/horn w/spkr	$129.95	$109.95	m
GRUNDIG			
YB-230 SW portable receiver	$129.95	$114.95	v
YB-400 SW portable receiver	249.95	224.95	m
HEIL			
BM-105T boom mic/headset; TenTec	$85.90	$69.95	m
HC-5 mic element	28.90	25.95	m
HY-GAIN			
2400-155 boom mic/headset	$79.95	$67.95	m
302 CD-45II rotator	279.95	249.95	m
ICOM			
AT-160 auto tuner;IC-728	$379.95	$329.95	m
A-21 navicom plus aircraft HT	699.00	522.95	f
BC-72 rapid desk charger	115.00	99.95	v
BP-110 battery case; P-series	21.00	17.95	m
BP-2 425ma/7.2V nicad battery	60.00	49.00	m
BP-84 7.2v 1000ma battery	87.00	77.95	m
CP-12 cigarette cable w/filter	21.00	19.00	m
CP-13 cigarette cable w/filter	21.00	19.00	m
H-18 VHF 16 ch, land mobile FM HT	399.95	359.95	m
HM-46L mini-speaker microphone	40.00	36.95	m
HS-51 headset w/VOX	67.00	59.95	m
IC-P2AT 2m HT	329.95	299.95	w
IC-P3AT 220mhz HT	339.95	309.95	m
IC-P4AT 440mhz HT	299.95	279.95	f
IC-W2A 2M/440mhz HT	469.95	399.95	f
IC-W21AT 2M/440mhz HT	509.95	459.95	f
IC-X2A 440/1.2ghz HT	639.95	599.95	f
IC-02AT/HP 2m 5W FM HT	239.95	219.95	f
IC-03AT 220mhz FM HT	319.95	289.95	m
IC-2AT 2m FM HT	219.95	199.95	v
IC-2iA 2m FM HT	299.95	259.95	mf
IC-229H 50W 2m FM mobile xcvr	379.95	339.95	v
IC-2410A 25W 2m/440mhz mobile	599.95	499.95	mf
IC-2410H 45W 2m/440mhz mobile	699.95	649.95	w
IC-4GAT 440MHz FM HT	349.95	319.95	m
IC-737 HF xcvr w/tuner/keyer	1379	1259.95	mf
M-5 5W marine band HT	399.95	349.95	m
RP-4020/50W 440mhz repeater	2349	2239.00	f
R-71A 100khz-30mhz swl rcvr	1059.00	939.95	m
R-7100 scanning VHF rcvr	1339.00	1249.95	m
U-12/460 12 ch UHF land mobile HT	229.95	199.95	m
U-2 2 ch UHF land mobile HT	499.95	269.95	m
V-100 16ch 50W mobile (no manual)	649.95	499.00	f
JRC			
JRL-2000F 160-12m HF amplifier	$3998	$3799	m
KANTRONICS			
DE-2400 modem for Data Engine	$99.95	$89.95	m
DVR2-2 2W 2M data/voice xcvr	169.95	152.95	m
KAM Plus all mode controller	299.95	269.95	m
Pactor Option for KAM	59.95	49.95	m
KENWOOD			
CD-10 call sign display	$49.95	$24.95	m
HS-5 communications headphones	74.95	66.95	v
PS-31 power supply (refurb)	219.95	123.95	f
RC-10 remote handset	219.95	179.95	m
RC-20 remote head	129.95	99.95	f
RM-1 remote control; TS-850S	53.95	47.95	m
TH-22AT 2m FM HT	259.95	229.95	mf
TH-27A 2m FM HT	289.95	269.95	c
TH-28A 2m FM HT	309.95	279.95	c
TH-47A 1.5w 440 HT	249.95	224.95	mf
TH-78A 2m/440 FM HT	449.95	399.95	f
TL-922A 2KW pep hf amp/2 3-500Z	1849	1699	m
TM-241A 50W 2M FM mobile xcvr	339.95	309.95	v
TS-450S HF xcvr w/sw rcvr	1129	1019	w
TS-950SDX deluxe 9 band HF xcvr	3799	3699	m
VB-2530 25W 2M amp	99.95	89.95	m
MFJ			
1229 interface	$129.95	$99.95	m
1274 packet TNC	119.95	109.95	f
247 SWR analyzer	149.95	134.95	m
250 dummy load	49.95	44.95	m
346 LCD freq counter	159.95	139.95	m
MIRAGE			
A1015G 6M 10/150W amp	$104.95	$99.95	v
B-5030G 2m 50/300w power amp	569.95	499.95	v
B-3030G 2m 30/300w power amp	499.95	449.95	m
C-3022G 220mhz 30/200W amp	439.95	399.95	m
D-26N 440mhz 2/60W amp	244.95	219.95	m
MOTOROLA			
H-5057R TRITON marine radio	$229.95	$199.95	m
NYE			
047-001 phone patch, 8-pin w/spkr	$154.95	$116.95	v
PHILIPS			
U-105 Light duty rotor	$69.95	$49.95	v
RANGER			
RCI-1000 1w 150MHz HT	$129.95	$99.95	m
RCI-2970 10M 100W xcvr	399.95	359.95	m
SANGEAN			
ATS-803 SW receiver	$189.95	$169.95	mf
ATS-808 SW receiver	189.95	169.95	m
SGC			
5412 SG-230 auto tuner	$489.95	$ 439.95	m
SONY			
ICF-7601 portable SW receiver	$119.95	$109.95	v
ICF-SW33 portable SW receiver	169.95	149.95	m
ICF-SW55 portable SW receiver	369.95	329.95	m
ICF-SW7600 port SW receiver	219.95	208.95	f
ICF-SW77 deluxe portable SW rcvr	499.95	449.95	m
ICF-SW7700 portable SW rcvr	169.95	149.95	v
ICF-2010 portable SW receiver	349.95	314.95	mf
IPS-360 GPS receiver	499.95	449.95	m
IPS-760 GPS receiver	1169	1049.95	m
PRO-80 handheld SW receiver	399.95	349.95	m
STANDARD			
C-158A 2M FM HT	$269.95	$239.95	w
C-5608DA 2m/440 mobile	794.95	659.95	m
TEN-TEC			
258 RS-232 interface	$69.95	$39.95	m
STARTEK			
ATH-30 1-2800 counter	$259.95	$229.95	m
UNIDEN			
BC-147XLT scanner	$99.95	$89.95	m
BC-148XLT scanner	109.95	99.95	m
BC-177XLT scanner	149.95	119.95	f
BC-560XLT scanner	119.95	99.95	f
BC-70XLT hand held scanner	159.95	139.95	f
HR-2600 10m transceiver	199.95	179.95	wf
YAESU			
FAS-1-4R remote antenna selector	$119.95	$109.95	m
FC-10 automatic antenna tuner	349.95	309.95	w
FL-7000 solid state HF amplifier	2079	1879	w
FRG-100B SWL receiver	549.95	499.95	m
FT-2400H 50W 2M xcvr	349.95	314.95	m
FT-26/25 2w 2m FM HT	259.95	229.95	m
FT-26/27 5w 2m FM HT	289.95	259.95	m
FT-290R Mk II 25W 2M FM/SSB xcvr	579.95	519.95	mw
FT-411E 2.5w 2m FM HT	299.95	249.95	m
FT-415 2w 2m FM HT	309.95	229.95	mf
FT-530 2M/440 FM HT	424.95	379.95	w
FT-690R Mk II 10W 6M FM/SSB xcvr	699.95	629.95	v
MW-1 wireless remote microphone	104.95	89.95	wv

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(f) Orlando	1-800-327-1917
(c) Clearwater	1-813-461-4267
(v) Las Vegas	1-800-634-6227

Telephone Interconnects . . .

You can access your Home telephone line from your Mobile or Handheld by installing an *Interconnect Device* on your existing base station radio.

CES

CES SDI-50 Automatic Simplex Interconnect • Uses *VOX-enhanced sampling,* gives telephone phone access to handhelds and mobiles. Remotely programmable from any touch phone. Allows telephone-to-mobile signaling for selective calling. Automatic CW ID, converts base stations to a remote station accessible from any telephone. AC adapter and cables included. 14⅛"w x 8¾"d x 1 13/16"h, 3¾ lbs **$489.95**

CES SSI-68 Simplex Interconnect • For mobile applications, controlled by DTMF audio from mobile or telephone. Interface and software allows for operation with a wide variety of radio and telephone systems. *VOX-enhanced sampling* for optimum performance. Comes with telephone cable, computer interface and AC adapter. 8⅞"w x 6⅛"d x 1¼"h, 2½ lbs...... **$299.95**

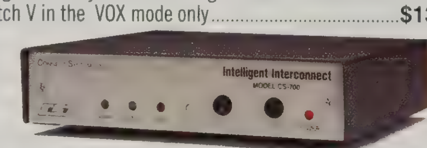
CES 410 Personal Patch • An economy, easy to use *basic* interconnect. Does not have all of the user programmable features found in the higher priced CES telephone interconnects. 10-16V DC. 8⅞"w x 6⅛"d x 1¼"h, 2½ lbs........... **$189.95**

Connect Systems, Inc.

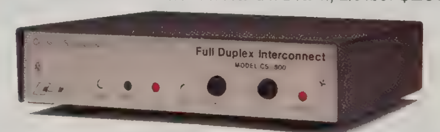
STANDARD FEATURES (all models): Built-in programming Keyboard and Digital display • Redial • Single or multi-digit access codes • Secret toll override access code • Toll Restrict • Regenerated tone or pulse dialout • Ringout on 1–9 ring Line in use detect • Call waiting • CW ID • Hookflash • More!

CONNECT SYSTEMS Private Patch V • *Top-of the line!* - user programmable multi-mode interconnect that can operate the following modes: *Enhanced Sampling, VOX Simplex, Semi-Duplex and Repeater Maker.* Private modes built-in for future use. Ninety memory Speed-dialer and Remote base mode, included. Connects to the mic. and speaker jacks of any simplex transceiver for VOX Simplex; other modes require internal connections. 12V DC. 11 7/16"w x 7⅜"d x 1⅞"h, 3½ lbs ... **$489.95**

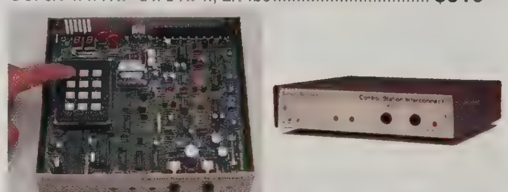
9801 Electronic Voice Delay (EVD) Option • Provides a full 1/2-second of delayed telephone audio to eliminate word clipping caused by slow switching radios. For use with the Private Patch V in the VOX mode only.................................... **$139.00**



CONNECT SYSTEMS CS-700 Intelligent Interconnect • For *Simplex operation.* Offers selectable *VOX Enhanced or VOX Controlled* sampling which allows the mobile operator to have positive control at all times. Internal connection to the discriminator of your simplex transceiver. Nine memory Speed-dialer standard. 12VDC. 6⅞"w x 7 1/16"d x 1 11/16"h, 2½ lbs. **$299.95**



CONNECT SYSTEMS CS-800 Full Duplex Interconnect Operates *full* or *half* duplex and also has a built-in *Repeater Maker* that allows you to turn your radio into a powerful repeater system. Use with dual banders or connect to your existing repeater for Full Duplex patch. Nine memory Speed Dialer is standard. 12V DC. 6⅞"w x 7 1/16 "d x 1 11/16"h, 2½ lbs.............................. **$319.95**



CONNECT SYSTEMS CS-900 Control Station Interconnect Voice activated, can be used simplex or through any remotely located repeater. The standard 1/2-second *Electronic Voice Delay* totally eliminates syllable or word clipping and results in outstanding simplex performance. Ninety memory Speed-dialer and Remote base mode included. Requires only connections are to the microphone and speaker jacks of your simplex transceiver. 12V DC. 6⅞"w x 7 1/16 "d x 1 11/16"h, 2½ lbs..... **$349.95**

ICOM Repeaters

Model RP-1520 (2-meters) • Covers 144-148MHz FM with 25W output. Fully synthesized – no retuning after changing frequency. *Features*: User programmable call sign ID; Hang-up and time out timers; Manual transmit; DTMF decoder for remote control operation; Local inhibit function and CTCSS encoder; Excellent IMD attenuation. Sensitivity: <0.5uV for 12 dB SINAD. Built-in speaker and microphone connector. 117V AC or 13.8V DC. 16¾"w x 5⅞"h x 14½"d, 37½ lbs .... **CALL**

Model RP-2210 (220 MHz) • Features are similar to RP-1520 above. Covers 220 to 225 MHz in 5 kHz tuning step increments with 25W output. CTCSS and hang-up timer are dip-switch programmable. EPROM programming for ID.... **CALL**

Model RP-4020 (440 MHz) • Similar to RP-1520/2210 except for different appearance. Covers 430 to 450 MHz with 25W output. The DTMF code includes a 4-digit password to prevent undesired remote control access................................ **CALL**

Model RP-4020/50W (440 MHz) • 50W output........... **CALL**

Model RP-1220 (1.2 GHz) • Similar to ICOM repeaters above. Synthesized, covers 1240 to 1300 MHz with 10W (high) or 1W (low) output. Battery back-up connector. Most functions can be remotely controlled using DTMF codes.................... **CALL**

JABRO

Replacement Batteries for ICOM HTs

Rechargeable Nickel Cadmium batteries and inserts available for ICOM Handhelds. • *See Price List under* ***NICAD BATTERIES.***

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RF Products

196-214 Telescoping 2m BNC 1/4-wave whip **$8.95**

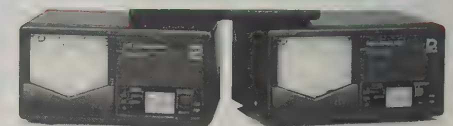
Improve mobile HT performance!– get the RF outside of the car. Simply attach the rubber duck antenna from your HT to this handy magnetic mount. Place it outside on the roof or trunk where it can radiate without obstruction. Two models.

199-416 • accepts BNC connector, w/10 ft. coax............ **$17.95**

199-495 • accepts PL-259 connector w/13 ft. coax **23.95**

DAIWA Accessories

SWR/Power METERS



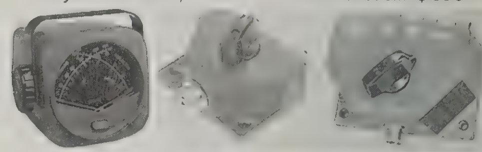
CN-101 SWR/Power Meter • Covers 1.8–150MHz, rated at 1.5KW (1.8–60MHz) and 1KW (144MHz) with 15/150/1.5KW power ranges. Large cross-needle meter simultaneously shows forward/reverse power and SWR. Indicates RMS/PEP at ±10% (of full scale) accuracy. 50Ω input/output, SO-239 connectors. 6"w x 3"h x 3.9"d, 1.5 lbs **$94.95**

CN-103M SWR/Power Meter • Same as CN-101, except 140–525MHz, rated at 200W with 20/200W ranges...... **$94.95**

NS-660PA SWR Meter (left) • Covers 1.8–150MHz, rated at 3KW with 30/300/3000W power ranges. Large cross-needle meter simultaneously shows forward/reverse power. Indicates RMS or PEP. 50Ω input with SO-239 connectors. 7.2"w x 3.7"h x 5.9"d, 2.7 lbs **$199.95**

DP-830 Digital SWR Meter • Covers 1.8–150 and 149–525MHz. ranges. Fully automatic! Large LCD displays forward power (Average or PEP) and SWR by digits and bar-graph simultaneously. Power ranges: 1.5KW (1.8–150MHz) and 150W (140–525MHz). SWR beep tones, clock function displays four different times. 50Ω input/output, SO-239 connectors. 5.9" w x 2.5"h x 4.3"d, 2.4 lbs. **$349.95**

DP-820 Digital SWR Meter • Same as DP-820, except covers only 140–525MHz, 150W and no clock function. **$269.95**



CN-410M Compact SWR/Power Meter (left) • For mobile or base use. Covers 3.5–30MHz, rated at 150W with 15/150W forward and 50W/5W reflected power ranges. Backlighted, cross needle meter shows forward/reverse power and SWR simultaneously. 50Ω input with SO-239 connectors, mobile bracket. 2.7"w x 3"d x 3.9"d, 10 oz............................ **$94.95**

CN-460M Compact SWR/Power Meter • Same features and rating as CN-410M, except covers 140–450MHz **$94.95**

CN-465M Compact SWR/Power Meter • Same features and rating as CN-410M/460M, except covers 140–450MHz, 75W with 15/75W forward and 5/25W reflected ranges. **$94.95**

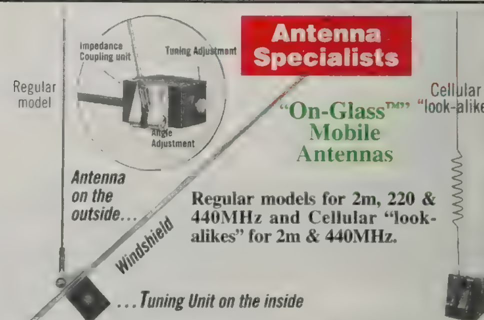
DAIWA COAXIAL SWITCHES

CS-201 Two position Coax Switch (center) • Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 600MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, unused terminal is always grounded. **$25.95**

CS-401 Two position Coax Switch (right) • Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 800MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, unused terminals are always grounded. **$119.95**

Antenna Specialists

"On-Glass™" Mobile Antennas



Regular models for 2m, 220 & 440MHz and Cellular "look-alikes" for 2m & 440MHz.

No holes! ... A small tuning unit attaches to the glass inside vehicle, and couples capacitively thru-the-glass to a full 1/2 wavelength element on the outside. Installs with DUOBOND™ adhesive that holds fast but is easily removed without damage. Rated for 100 watts. Includes adhesive, 15 ft. coax and connector..... ***See Antenna Specialists in the Price List.***

Main Store Display Area

Paul and Don in Video and Camcorder Display Area

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It's the Consumer Electronics Division of AMATEUR ELECTRONIC SUPPLY® with three locations: the main store in Oshkosh, Wisconsin and satellite stores in Fond du Lac and Ripon, Wisconsin.

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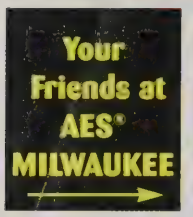
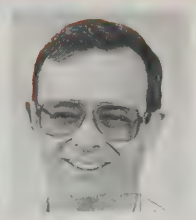


RAY K9KHW


GARY W9NR

RON WA9VRY

DALE N9BRX

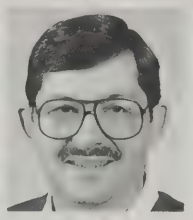
JEFF N9EDQ

PAUL W9KHO

JIM WB9LSR

DICK KE9QU

MIKE N9LBQ


JOHN AB9G

TOM N9EAW

CARL WB9STM

CHRIS N9LBS

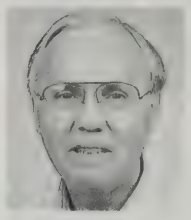
PAT

STEVE

ANTONE

CARLENE

ANGELA


MILES K9HMQ

JOHN N9COB

BARBARA N9RSZ

PEGGY WB9RWV

MARY

CAROL

JOYCE

ANITA

KATHY

ELIN K9YHE

TED W9NHE

JOHN F.

JEFF K.

DAVE WB8BAG

PHIL WD8AAN

ED N8FIN

BOB WB8WEN

BEN AA8AH

SAM N8UZN

JOHN WA8PKB

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GRANT K4IQW

BRUCE WD4HIM

STUART N4IPX

JIM N4LIO

NATHAN KN4BJ

EDDIE KD4RAZ

RICK

RODNEY KD4TVY

GIL K4ISK

CHARITY

LEN K4BDP

BILL WA9RDA

VICTOR N4COU

DON KA2KDP

SQUEAK AD7K

TOM N7GBJ

HAROLD AA7UL

RICHARD KG7QK

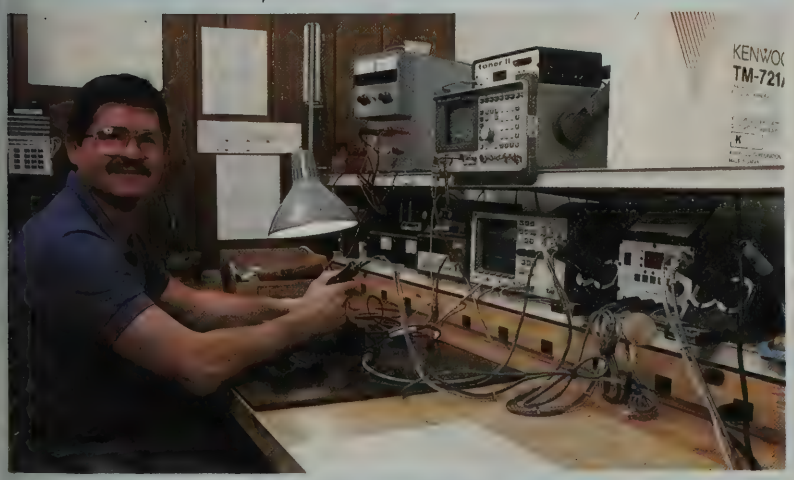
JOHN

BOB KG7D

Our Service Department! . . . a Great Reason to buy from AES®

MILES, K9HMQ • Service Manager

RUSS, WB9PAS • Service Technician



JOHN, N9COB • Assistant Service Manager

BOB, KG7D • Service Technician at the Las Vegas Store

We're a Full Service Dealer! • Unlike other dealers, when you purchase a new radio from us, our Service Department is able to provide you with outstanding Technical Service .

If you have a problem, we are determined to keep you on the air! To enforce this, we offer *priority* warranty service on all new radios that we sell. You can be assured that if your new radio fails within 10 days after receiving it, it will be repaired *promptly*, or we'll *replace it.* If failure occurs after the 10 day priority period, it will be repaired under our shop's *"Warranty Repairs First"* policy, which will get you back on the air with a minimum delay.

Technicians • Currently, we have seven–three are shown here at work in their shops in Milwaukee. In addition, we have John–WA8PKB in the Wickliffe Ohio store, Gil–K4ISK in Orlando, and Bob–KG7D in Las Vegas.

Experience • These technicians are all *Factory Trained* on the major brands (ICOM, YAESU, KENWOOD), and others. They have more than 70 years of cumulative experience in the ham service field and are FCC and NABER certified.

We're Equipped to do the job! • Each shop uses a *state-of-the-art* Hewlett Packard 8920A test set, which replaces several pieces of conventional test equipment. It combines twenty-two different instruments including a *spectrum analyzer, tracking generator, digital scope, distortion and SINAD meter, all mode signal generator, frequency counter and more!* It's highly stable, very accurate and helps speed repairs because it's *I-BASIC computer* allows the technicians to store custom test parameters for equipment that they frequently service. We also use H-P's digital scopes and DVM's, plus we have the latest in *high-tech* soldering stations for work on the latest delicate surface mount technology.

Repairs • Whether your purchased from us or not, we can extend our professional technical service to your *out-of-warranty* late model ham gear. This is on a time available basis, and provided that service parts are still available. To make arrangements, call the AES Service Department in Milwaukee at 414-358-0333; ask for Miles or John.

Labor Rates • Our rate for Out-of-Warranty Service is $51.00 per hour. **Note:** there is a $68.00 *minimum* charge for service on HF/VHF Base Stations, and a $51.00 *minimum* charge on VHF mobiles and Handhelds.

Policies and other Information • See page 160, and also see page 159 for Warranty Information and Telephone Numbers of the Major Manufacturers.

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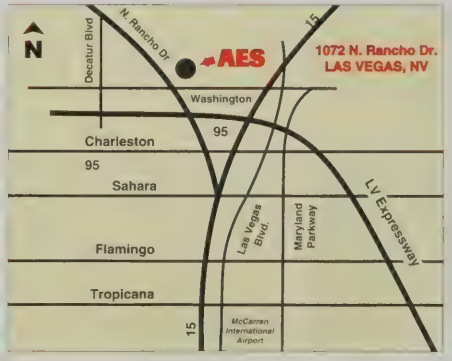

MILWAUKEE, WISCONSIN

This entire building which has over 50,000 sq. ft. of floor space, contains the AES® Main offices and Computer Center. Included are the Mail Order, Advertising and Service Departments. The large Showroom and Sales area features an extensive display of the latest Ham Equipment and other electronic goodies, and there's plenty of parking for customers. This structure was specifically designed to function as an efficient Mail Order operation with a huge warehouse that provides plenty of space for large inventories. For our customers this means fewer backorders and shipping delays. In fact, we can give Same Day Service on most Mail or Telephone orders.

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TRADE-INS: Use a sturdy carton and plenty of packing material for protection. Ship PREPAID and FULLY INSURED. Canadians inquire about taxes and customs charges before releasing your shipment. Do not use Bus or Parcel Post. Collect shipments will not be accepted. AES® assumes no responsibility for damage in transit or for filing damage claims.

ACCOUNT NO. _____ Date _____

Name _____ Call _____

Address _____

City/State _____ Zip _____

You may telephone me at *(Be sure to show area code):*

Home # _____ Hours: _____

Work # _____ Hours: _____

SHIP TO *(If other than at left):*

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IF YOU HAVE MOVED since your last order, please show your old address:

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QTY.	DO NOT USE	MANUFACTURER • PART OR MODEL # • DESCRIPTION	PRICE EACH	TOTAL

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CIRCLE ONE

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Account Number

Cardholder's Name Card Expires

Cardholder's Signature Date

❑ **CHECK OR MONEY ORDER** • For your own protection **DO NOT MAIL CURRENCY...** send a Bank Check or Money Order. A Personal Check may delay shipping until it clears our bank. Please attach your remittance firmly to top of this order blank.

❑ **COD • (UPS Ground, only)** The total cost of Merchandise, Shipping Charges and $6.50 COD Fee will be collected in Cash or Certified Check upon delivery.

MINIMUM $20.00 COD ORDER – NO AIR OR PARCEL POST!

IF YOU HAVE A TRADE-IN — CHECK ONE OF THE FOLLOWING:

❑ Hold this order until you receive and approve my Trade-in.

❑ Payment-in-full enclosed. Refund the allowance after my Trade-in is received and approved.

❑ Charge the **TOTAL AMOUNT** (line 8) of new merchandise on my Charge Card. Issue credit to my Charge Card when my Trade-in is received and approved.

LINE 1 —	Total Amount of Order	$
LINE 2 —	Subtract here AES Refund Checks, Gift Certificates, Coupons or Special Allowances (if any)	–
LINE 3 —	Subtract TRADE-IN Allowance (if any) ..... Enclose mail quotation or reference telephone quote & list Trade-in items. **IMPORTANT!** Persons having a Trade-in must check one of the choices in the box at the lower left of this Order Blank.	–
LINE 4 —	**Balance**	$
LINE 5 —	**Sales Tax :** ❑ WI- 5.5%, ❑ FL- 6%, ❑ NV- 7%, ❑ OH-5.75% *Tax rates subject to change without notice.*	$
LINE 6 —	UPS or Postal Charges (see reverse side)	+
LINE 7 —	Due AES from previous order (if any)	+
LINE 8 —	**Total Amount Due**	$
LINE 9 —	**Amount Enclosed**	–
LINE 10 —	**Final Balance Due** (if any)	$

For orders being shipped by UPS or Air Priority Mail, etc. please allow a sufficient amount for Shipping charges and Insurance. Any excess amount remited will be promptly refunded. DO NOT remit for Truck or Air Freight shipping charges, they will be collected upon delivery. Shipping charges are taxable in WI, FL & NV.

Cut along dotted line or make Photocopy

INNOVATIONS

DESIGNED TO SAVE YOU TIME AND MONEY

Especially for

AES® CUSTOMERS

1 WE HAVE SIMPLIFIED OUR SHIPPING POLICY TO BETTER SERVE YOU!

NOW YOU CAN SAVE MONEY ON YOUR AES® PURCHASES SHIPPED VIA UPS GROUND IN THE 48 CONTIGUOUS STATES!

AMOUNT OF ORDER	SHIPPING CHARGES
Up to $100.00	$4.50
$100.01 to $500.00	$6.50
$500.01 to $1,499.99	$8.50
$1500.00 and UP	PREPAID BY AES®!

IMPORTANT INFORMATION

1. Shipping charges are based on amount of the original order. Adding to or deleting from the original order will not affect the shipping charges.
2. The order amount on which charges are determined is pre-coupon and pre-tax.
3. 2nd & 3rd shipments (back-orders) are shipped **PREPAID** at **AES®** expense (UPS ground only).
4. COD fees not included. Add $6.50 per carton.
5. Shipping charge includes adequate insurance.
6. Other UPS methods (Red, Blue & Orange), RPS, Priority Mail, Parcel Post and Federal Express are charged at Regular Rates without any credit for UPS ground rates.
7. Check with sales person when ordering.

2 The AES® CREDIT CARD*

- Good at All **AES®** Stores in person or on phone orders.
- Use for anything in the **AES®** Catalog - – No minimum charge.
- No down payment required.
- No Payment for 90 Days.
- Low monthly payments.
- No annual fees.
- Finance up to $5,000... or more!
- Leaves other major Credit Card lines open.
- Buy the gear you want NOW ... why wait? *or...*
- Get approved now and have your **AES®** Credit Card ready when you need it.
- Quick Approval to qualifiers
- Be an **AES®** Preferred Customer.

MORE ON THE FOLLOWING PAGES

* 18.9% APR

Application for AMATEUR ELECTRONIC SUPPLY® Credit Card

(MERCHANT USE ONLY)

Merchant Name: _____ Phone Number: _____ Salespersons Name: _____

Applicant Driver's License No./State Identification No.: _____ State: _____ Expires: _____

Co-Applicant Driver's License No./State Identification No.: _____ State: _____ Expires: _____

Account Number: _|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_| Credit Line $ _____

Initial Purchase $ _____ Down Payment $ _____

PRIMARY APPLICANT

First Name: _____ M.I.: _____ Last: _____

Date of Birth: _____ Soc. Sec. No.: ___ ___ _____ # Dep. (not including yourself) _____

Present Address (NO. & Street): _____ Apt/RR: _____

City: _____ State: _____ Zip: _____ Home Phone: ( ) _____

Time at Residence: ____ Yrs. ____ Mos. ☐ Own ☐ Rent ☐ Other _____ Monthly Payment $ _____

Previous Address (NO. & Street): _____ Apt/RR: _____

City: _____ State: ____ Zip: _____ Time at Prev. Res.: ____ Yrs. ____ Mos.

Employer: _____ City: _____ State: ____ Business Phone: ( ) _____

Net Monthly Income: _____ Time at Employment: ___ Yrs. ___ Mos. Position: _____ Previous Employment: ___ Yrs. ___ Mos.

Other Household Monthly Income: You need not list income from Alimony, Child Support or Separate Maintenance unless you wish it considered for purposes of granting credit. Net $ _____ Source: _____

PLEASE CHECK ONE OF THE FOLLOWING BOXES: ☐ Checking ☐ Savings ☐ Both ☐ None

CO-APPLICANT

First Name: _____ M.I.: _____ Last: _____

Date of Birth: _____ Soc. Sec. No.: ___ ___ _____ Employer: _____

Net Monthly Income $: _____ City: _____ State: _____ Time at Employment: ___ Yrs. ___ Months

Other Household Monthly Income: You need not list income from Alimony, Child Support or Separate Maintenance unless you wish it considered for purposes of granting credit. Net $ _____ Source: _____

TRUTH IN LENDING CHART (Do not sign without reading)

ANNUAL PERCENTAGE RATE FOR PURCHASES	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE	GRACE PERIOD FOR REPAYMENT OF BALANCES FOR PURCHASES	TRANSACTION FEE FOR PURCHASES	LATE PAYMENT FEE	OVER THE CREDIT LIMIT FEE	RETURNED CHECK FEE	METHOD OF COMPUTING THE BALANCE FOR PURCHASES	MINIMUM FINANCE CHARGE
18.9%	None	25 Days	None	$10.00	$10.00	$10.00	Average Daily Balance Method Including New Purchases	None

APPLICATIONS FOR CREDIT WILL NOT BE PROCESSED WITHOUT THE REQUIRED SIGNATURES:

BY SIGNING BELOW YOU:

(1) Certify that the statements above are true and that we may rely on them.
(2) Acknowledge that we may obtain a credit report on you.
(3) Agree that if this application is accepted and credit is extended by American General Financial Center, you will be bound by the terms of the Cardholder Agreement attached hereto, a copy of which has been provided to you.
(4) Agree that if your application for a credit card is not approved, your application may be given to our affiliate to review and an offer for a retail installment contract or an installment loan (the terms of which may differ) may be made to you. You are in no way obligated to accept an offer from our affiliate.

Please submit original, signed application. Photocopy or FAX cannot be accepted.

PLEASE SIGN _____ _____
PRIMARY APPLICANT SIGNATURE DATE

PLEASE SIGN _____ _____
CO-APPLICANT SIGNATURE DATE

You are applying for a credit card account with American General Financial Center, a Utah Corporation, or for other credit available from its affiliate.

INSURANCE ELECTION OPTION:

Please enroll me in the ChargeGard Plan which protects my credit card account as disclosed. Full details of coverages, exclusions, limitations are contained in the Certificates of Insurance which I understand will be mailed to me. I understand and agree that premiums will be charged to my credit card account as long as my account is in good standing. I understand that if my account is cancelled, my ChargeGard Insurance is also cancelled. I may cancel at any time. I understand that enrollment in the Insurance plan is optional and is not required to obtain/maintain credit.

☐ YES, I want ChargeGard Insurance coverage (subject to state availability)
☐ NO, I do not want ChargeGard Insurance.

NY RESIDENTS: No coverage is available in NY
*Unemployment and disability coverages are available only to the Primary Cardholder

PLEASE SIGN _____ _____
PRIMARY APPLICANT SIGNATURE (person to be insured) DATE

Cut along dotted line or make Photocopy

CREDIT CARD CARDHOLDER AGREEMENT AND APPLICATION FORM WITH AMERICAN GENERAL FINANCIAL CENTER

1. **APPLICATION TO AMERICAN GENERAL FINANCIAL CENTER:** Each person executing the Application for a credit card cardholder account applies to American General Financial Center (AGFC) for the establishment of an open end credit account. If AGFC accepts the application, credit will be extended for (1) the purchase of goods and/or services from businesses that honor the Credit Card Account and (2) the purchase of financial products or services that AGFC may offer from time to time. Each person executing this Agreement agrees to live up to the terms of this Agreement.

2. **DEFINITIONS**: In this Agreement "We", "Our", and "Us" means American General Financial Center or AGFC. "You" and "Your" means each person who signs the application and Cardholder Agreement. "Credit Card" means the Credit Card issued to you by us under this Agreement. This Account and all purchases made on it are not binding on us until your credit is approved. The application will be deemed approved and the Account established when we (or the merchant) give you notice of that fact. You will be deemed to have accepted the credit card Account and agreed to be bound by the terms of this Agreement by your use of the Account evidenced by a purchase slip.

3. **OWNERSHIP**: The Credit Card remains our property and may be cancelled by us at any time without notice. You, and all authorized users, agree to maintain good credit with all creditors. You, and all authorized users, agree to surrender the Card and any other access devices and to discontinue utilization of the Credit Card Account by any other means immediately upon request.

4. **CREDIT LIMIT**: We will tell you what your Credit Limit is on your Account. You promise not to allow the outstanding balance of your Account to exceed your Credit Limit. We do not have to honor any use of your Account which would cause you to exceed your Credit Limit. If you exceed your Credit Limit we may honor that use of your Account without giving up our rights, and it does not mean that we have to honor other uses which would cause your Credit Limit to be exceeded. We may increase or decrease your Credit Limit at any time.

5. **YOUR RESPONSIBILITIES UNDER THE AGREEMENT:** You agree as follows:

   A. To repay us for all purchases made under the Account, plus Finance Charges and any other charges due under the Account, as described in this Agreement, in accordance with the monthly billing statements we will send you.

   B. That you are responsible for purchases made by any person you allow to use your Card or Account.

   C. Not to allow the outstanding balance to exceed your Credit Limit, but if you do you agree to repay us such excess amount within 10 days after our request. Exceeding the Credit Limit will result in our charging your Account an over-the-credit-limit fee.

   D. Not to allow the Account or Card to be used by anyone other than yourself and authorized users.

   E. To give us credit information as we may request from time to time.

   F. To notify us of a change in your name and address.

   G. To live up to all other provisions of this Agreement.

6. **YOU MAY NOT COMPROMISE A DISPUTE BY NOTATION ON A NEGOTIABLE INSTRUMENT:** No dispute in the amount owed under this Agreement may be settled or compromised by a notation or statement on the back or front of any negotiable instrument intended for payment of the debt or by any document whether or not accompanied by a negotiable instrument which document purports to compromise or settle the debt or have us acknowledge the debt as paid in full by the act of negotiating a negotiable instrument. All such documents or negotiable instruments must be sent to the address for billing errors contained in this Agreement. Any actions arising under this section shall be determined in accordance with Utah law.

7. **RETURNED CHECK FEE**: We may assess, and if assessed, you will pay a returned check charge of $10.00 for any check or other form of negotiable instrument offered in payment on your Account which is presented for payment and which is subsequently not paid.

8. **OVER-THE-CREDIT-LIMIT PENALTY FEE**: If you exceed your credit limit you will be charged a $10.00 over-the-credit-limit charge.

9. **LATE PAYMENT FEE:** We may assess, and if assessed, you will pay a $10.00 late payment charge when you fail to make at least the minimum monthly payment within 10 days of the Date Payment Due. Payments are not considered made until date of receipt.

10. **COLLECTION COSTS:** To the extent permitted by law, if we must refer the collection of your Account to an attorney not a salaried employee of ours, you promise to pay us a reasonable attorney's fee and all court and collection costs actually incurred by us in connection with any collection proceeding as may be allowed by law.

11. **CANCELLATION**: We own the Credit Card. You may not assign the Account. On request you must surrender the Credit Card to us or any authorized institution or merchant. We may cancel this Agreement at any time, subject to applicable law. You may cancel this Agreement by sending us a written request for Account cancellation with all your Cards and other means of Account access cut in half. Cancellation will not affect the existing obligations.

12. **DEFAULTS AND ACCELERATION**: All amounts you owe under this Agreement may at our option and without further notice become immediately due and payable if you default under this Agreement. You will be in default under this Agreement if you fail to pay any required amount on time, make any false or misleading statements to AGFC, or otherwise fail to comply with this Agreement. We may cancel your Account and require payment of the full amount you owe us if you die, become bankrupt or insolvent, or if we deem ourself insecure, believing in good faith the prospect of payment thereunder to be impaired.

13. **CHANGES TO THIS AGREEMENT**: We may change the terms of this Agreement from time to time and shall give you notice of the changes as required by law. Such changes may include, without limitation, changes in the monthly periodic rate (and the corresponding Annual Percentage rate) and changes in the method of computing Finance Charges. If we do so, such changes will apply to both the outstanding balance in your Account and future transactions.

14. **LOST OR STOLEN CARD:** You may be liable for unauthorized use of your Card. You will not be liable for unauthorized use that occurs after you notify American General Financial Center, Service Center, P.O. Box 3053, Evansville, Indiana 47730-3053, 1-800-628-9324, orally or in writing, of loss, theft, or possible unauthorized use of your Card or Account. In any case, your liability shall not exceed the lesser of $50 or the amount of the unauthorized use.

15. **DELAY IN TAKING ACTION:** We will not lose any of our rights under this Agreement if we delay taking action for any reason. To the extent allowed by law, we may take other action not listed in this Agreement. If we take other action, we will not lose our rights under this Agreement.

16. **CREDIT INFORMATION**: As required by law, you are hereby notified that if you fail to fulfill the terms of your credit obligations a negative credit report reflecting on your credit record may be submitted to a credit reporting agency. You agree that we may request a consumer credit report on you and may use it in connection with any application for establishment of this Account. You also agree that we may provide information about your account, consumer report information and other information we may have about you to affiliates of ours for possible marketing to you of financial services provided by our affiliates.

17. **APPLICABLE LAW**: This Agreement shall be governed by and interpreted entirely in accordance with the laws of the State of Utah, or, to the extent such laws are superseded by federal law, federal law shall apply. AGFC will process your application, make the decision to approve and open your Account and advance credit for you from our Midvale, Utah office. You agree that all terms, charges, fees and conditions are material to the determination of the Finance Charges, Annual Percentage Rate, and Monthly Periodic Rate.

18. **APPLICATION OF PAYMENTS**:

   A. Payments are allocated between Special Payment Plan Purchases and purchases not made under any Special Payment Plan (here-in Regular Revolving Purchases) in the following priority:

      1. Delinquent Special Payment Plan Purchase balances.
      2. Delinquent Regular Revolving Purchase balances.
      3. Special Payment Plan Purchases minimum payment due.
      4. Regular Revolving Purchases minimum payment due.

      Payments in excess of the minimum payment due and delinquent amounts will be applied first to the Regular Revolving Purchases balances and then to the Special Payment Plan Purchases balances.

      Please follow the instructions on your billing statement if you have more than one purchase and wish to apply your payment to a specific purchase.

   B. For that portion of the payment allocated to the Regular Revolving Purchases side of the Account, the payment will apply:

      1. First to the sum of fees and accrued Finance Charges;
      2. then to the previous billed purchases;
      3. then to new purchases.

   C. For that portion of the payment allocated to the Special Payment Plan Purchases side of the Account, the payment will apply first to the delinquent amount of the oldest Special Payment Plan Purchase on the Account, reducing first the interest and then the principal. When the payment clears the delinquent amount of the oldest delinquent Special Payment Plan Purchase, the payment applies to the next oldest delinquent Special Payment Plan Purchase on the Account. When the payment clears all delinquent amounts for Special Payment Plan Purchases, the payment applies to the interest and principal. Interest and/or principal is reduced on Special Payment Plan Purchases in the same sequence as the purchases occurred.

19. **FINANCE CHARGES**: Finance Charges begin on the date of Posting. You will avoid Finance Charges on Purchases if you paid the entire New Balance shown on your previous billing statement by the Payment Due Date. If the new balance is not paid in full by the Payment Due Date, Finance Charges will begin to accrue on the Average Daily Balance of Purchases (defined below). This includes previously billed and unpaid Purchases and new Purchases, whether or not billed on your periodic statement, from the Posting date. The **Finance Charge** on your Account is figured by applying the **Monthly Periodic Rate** of 1.575%, which is an **Annual Percentage Rate** of 18.9% to the Average Daily Balance. To get the Average Daily Balance on which Finance Charges are computed, we add the total daily balance of purchases (both previously billed and unpaid purchases and new purchases whether or not billed on your periodic billing statement yet) plus any unpaid balance of purchases under a Special Payment Plan which first became subject to Finance Charges on such day and we deduct any payments or credits. The sum is divided by the number of days in the statement period. (Special Payment Plan purchases which have not become subject to Finance Charges are not included in the Average Daily Balance.)

20. **SPECIAL PAYMENT PLAN PURCHASES:** In addition to Regular Revolving Purchases that earn Finance Charges as stated above, you may from time to time be permitted to make purchases with the following Special Payment Plans which will be specified on your purchase slip:

   A. Delayed Payment Purchases - No payment will be due on the Delayed Payment Purchase until the month specified on the purchase slip; however, Finance Charges will begin to accrue on the date the Delayed Payment Purchase posts to the Account. The Delayed Payment Purchase will not delay the payment due date for other purchases made on your account.

   B. Waived Finance Charge Purchases - No Finance Charges will begin to accrue on the purchase until the date specified on the purchase slip; however, regular payments must be made. Finance Charges will not be waived for other purchases made on your Account.

   C. Delayed Payment and Waived Finance Charges - No payments are due and Finance Charges will not begin to accrue on the purchase until the date specified on the purchase slip. Finance Charges will accrue and payment must be made for other purchases made on your Account.

   D. Same as Cash - If during the time period (the option period) specified on the front of your purchase slip you pay off the balance of the purchase, no Finance Charges will be assessed on the purchase. However, if the balance of the purchase is not paid during this time period, Finance Charges will be assessed from the Post date of the purchase. Minimum Payments may be required during the option period as specified on the front of your purchase slip and in this Cardholder Agreement.

   E. Reduced Annual Percentage Rate - Finance Charges will be calculated at a lower annual Percentage Rate than disclosed in the Finance Charges paragraph of the Agreement. The lower Annual Percentage Rate applicable to such special purchases will be disclosed on the purchase slip and on your monthly periodic statement.

21. **BILLING STATEMENT/MINIMUM PAYMENT:** If your Account has a balance, we will send you a Billing Statement (Statement) periodically. You must pay at least the Minimum Payment given on the Statement by the Payment Due date. The Minimum Payment will be the greater of 3% of the Total New Balance plus the monthly payment amount due on special Payment Plan purchases or $10.00. A total New Balance of less than $10.00 is payable in full.

    You have the right to pay all or part of the balance due under the Account at any time without a prepayment penalty. Payment made in an amount greater than the Minimum Payment does not relieve you of your obligation to pay the next Minimum Payment when it comes due. We will not refund to you a credit balance of $1.00 or less.

    We can accept late payments, partial payments, checks and money, without losing any of our rights under this Agreement. We can also delay in enforcing our rights under this Agreement any number of times without losing them. Also, we may, to the extent permitted by law, take other action not listed in this Agreement.

22. **PLACE TO SEND PAYMENTS**: Payments you make on the Account are to be mailed to the address we set forth on the Monthly Billing Statement.

23. **SECURITY INTEREST**: (Except in New York)

    We will have a purchase money security interest in all goods purchased on your Account until the goods are paid for in full. If you do not make your minimum payments, we may take possession of only the goods that have not been paid for in full.

24. **ADDRESS**: You may write us at American General Financial Center, Service Center Post Office Box 3121, Evansville, IN 47731-3121.

25. **OTHER PROVISIONS**:

    (a) We shall have no liability to you should any person refuse to honor your Card or Account, (b) you may not assign your rights under the Account, (c) we may assign our rights without obtaining your consent, (d) any notice given by or to any person executing the Application, or action taken or agreement made by any such person, shall bind all such persons.

26. **EXECUTION OF AGREEMENT:** Your signing the Application also binds you to the terms of this Agreement if we accept your application and extend your credit. You will be given a copy of this Agreement.

ANNUAL PERCENTAGE RATE FOR PURCHASES	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE	GRACE PERIOD FOR REPAYMENT OF BALANCES FOR PURCHASES	TRANSACTION FEE FOR PURCHASES	LATE PAYMENT FEE	OVER THE CREDIT LIMIT FEES	RETURNED CHECK FEE	METHOD OF COMPUTING THE BALANCE FOR PURCHASES	MINIMUM FINANCE CHARGE
18.9%	None	25 Days	None	$10.00	$10.00	$10.00	Average Daily Balance Method	None

Manufacturer Phone Numbers & Warranty Information

AEA
2006 196th St. SW Units O & P
Lynnwood, WA 98036
Service/Tech Suppport: 206-775-7373
Sales: 206-774-5554
Upgrade Hot Line: 206-774-1722
Literature Request Line: 800-432-8873
FAX: 206-775-2340
Limited Warranty: 1 year

ALINCO
438 Amapola Avenue, #130
Torrance, CA 90501
Customer Service: 310-618-8616
FAX: 310-618-8758
Limited Warranty: 1 year parts and labor. Within 15 days of purchase, extended 1 year parts and labor warranty availble from **ALINCO**.

AMERITRON
921 Louisville Road
Starkville, MS 39759
Shipping:
116 Willow Road
Starkville, MS 39759
Customer Service: 601-323-8211
FAX: 601-323-6551
Limited Warranty: 1 year on all products except 2 years on AL-80B. All tubes are guaranteed by the respective tube manufacturers.

COMET (NCG)
1275 N. Grove St • Anaheim CA 92806
Customer Service: 800-962-2611
FAX: 714-630-7024
Limited Warranty: 90 days

CUSHCRAFT Corporation
P.O Box 4680.• Manchester, NH 03108
Telephone: 603-627-7877
FAX: 603-627-1764
Limited Warranty: 1 year against material defects and workmanship.

HUSTLER
One Newtronics Place
Mineral Wells, TX 76067
Customer Service: 817-325-1386
FAX: 817-328-1409
Limited Warranty: 1 year

KANTRONICS, Inc.
1202 E. 23rd St.
Lawrence, KS 66046
Product Information: 913-842-7745
Service/Tech Suppport: 913-842-4476
Hours: 9 A.M. – noon & 2 PM – 5 P.M.
24 hour BBS support: 913-842-4678
(1200-14,400 v.32 bis 8 bits no parity)
FAX: 913-842-2021
Limited Warranty: 1 year, parts/labor.

ICOM AMERICA, Inc.
2380 116th Avenue NE
Bellevue, WA 98004
Telephone: 206-454-8155
Customer Service Hotline: 206-454-7619
Parts Department: 206-454-8155
FAX: 206-454-1509

Regional Customer Service Centers
18102 Sky Park South., Suite 52-B
Irvine, CA 92714
Telephone: 714-852-8026
FAX: 714-852-8716
3071 #5 Road, Unit 9
Richmond, British Columbia
Canada V6X 2T4
Telephone: 604-273-7400
Limited Warranty: 1year parts/labor.

JRC
430 Park Avenue
New York, NY 10022
Customer Service: 212-355-1180
FAX: 212-319-5227
Limited Warranty: 1 Year

KENWOOD U.S.A.
P.O. Box 22745
Long Beach, CA 90810
Customer Relations: 310-639-5300
Fax: 310-631-3913
Parts: 800-262-1312 • 310-515-0207
Fax: 310-538-4919
Bulletin Board (Free): 310-761-8284

KENWOOD Service Center East
829 Lynnhaven Parkway, suite 130
Virginia Beach, VA 23452
Customer Relations: 804-340-1702
Fax: 804-340-6809
Parts: 800-637-0388 • 516-483-5742
FAX: 516-483-5904
Limited Warranty: 1 year, parts/labor.

LARSEN
3611 N.E. 112th Ave
Vancouver, WA 98668
Customer Service: 206-944-7551
Full Warranty: 3 years

MFJ Enterprises, Inc.
P.O. Box 494
Mississippi State, MS 39762
Telephone: 601-323-5869
Technical Support: 800-647-8324
FAX: 601-323-6551
Warranty: 1 year – "no matter what"

RF PARTS (Diamond Antennas)
1320 Grand Ave. • San Marcos, CA 92069
Customer Service: 619-744-0750
FAX: 619-744-1943
Limited Warranty: 90 days, call for RA#

KLM
14792 172nd Drive S.E.
Monroe, WA 98272
Telephone: 206-794-2923
FAX: 206-794-0294
Limited Warranty: 1 year parts/labor.

MIRAGE
P.O. Box 1000
Morgan Hill, CA 95038
Shipping:
16890 Church Street, Bldg. 14
Morgan Hill, CA 95037
Telephone: 408-779-7363
FAX: 408-779-8845
Limited Warranty: Amplifiers and Wattmeters: 5 years parts/labor
Repeater Amps: 2 years parts/labor
Pre-amplifiers Power transistors: 1 year.

RF CONCEPTS
1202 E. 23rd St.
Lawrence, KS 66046
Product Information: 913-842-7745
Service/Tech Suppport: 913-842-4476
Hours: 9 A.M.12 noon and 2 PM – 5 P.M.
24 hour BBS support: 913-842-4678
(1200-14,400 v.32 bis 8 bits no parity)
FAX: 913-842-2021
Limited Warranty: 1 year, parts/labor.

STANDARD Amateur Radio, Inc.
P.O. Box 48480
Niles, IL 60648
Telephone: 312-763-0081
FAX: 312-763-3377**For UPS:**
Limited Warranty: 1year, parts/labor.

STARTEK
398 NE 38th St.
Fort Lauderdale, FL 3334
Telephone: 305-537-5577
FAX: 305-561-9133
Limited Warranty: 5 yrs parts, 1 yr labor

YAESU U.S.A.
17210 Edwards Road
Cerritos, CA 90701
Telephone: 310-404-2700 or 4828
FAX: 310-404-1210
Limited Warranty: One year, parts/labor

For other In or Out of Warranty Service Information call the **AES®** Service Department at:

414-358-0333

Experienced and Certified technicians on staff, using the latest in techniques and test equipment. We welcome your repair work!

Note: We are always looking for qualified Service Technicians. For information, call the above number and ask for Miles.

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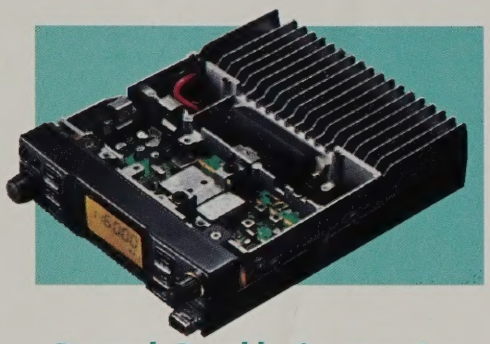

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